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ORIGINAL COMMUNICATIONS.

ART. I.—CLINICAL LECTURE ON HYDROCELE,

Delivered at the Baltimore Infirmary October 27, 1860,

BY N. R. SMITH, M. D.

Professor of Surgery in the University of Maryland.

GENTLEMEN: The case of hydrocele before us is resulting favorably, and I wish to describe to you, to-day, the operation which was performed to effect this result. It has a peculiar interest about it in this connection, because two operations of a different kind had been previously performed without success. As we have not reached this disease in the regular course of lectures, allow me first to point out some of its most prominent characteristics.

The word Hydrocele is derived from two Greek words which signify water and tumor, and might, therefore, be applied to similar tumors in other parts of the body; but surgeons generally at present apply the *single* term only to effusions of water within the bag of the scrotum. In this situation

the watery fluid may occupy the sac of a serous membrane—the tunica vaginalis—(as in the patient before you, and which is the most frequent occurrence,) or it may fill a sac or cyst of its own, which for the most part will be found to communicate with the epididymis. I have found these latter tumors in this region of comparatively rare occurrence.

Hydrocele is a chronic disease, and is caused by a low degree of inflammation; the theory of the various operations for its cure have been based upon this conclusion. Those having the disease generally attribute it to some over-exertion or strain, but how it could result from such a cause is difficult to determine. Those engaged in active pursuits, and about the middle period of life are more prone to it, and it more frequently happens in the midst of apparent good health than otherwise.

How do we distinguish this disease? By inquiring into its history we find that an enlargement begins seemingly around the testis of one side, to which the patient's attention is drawn rather by the increased size and weight than by any acute pain. If the dropsy is in the cavity of the tunica vaginalis, gravity gives the tumor the characteristic pyriform shape up, at least, to a certain point of enlargement; and if this form of increment is observed during its progress by the patient, it will facilitate your judgment concerning those larger hydroceles which afterwards lose this shape from over distension. The base of the swelling being below, also serves as a diagnostic from those enlargements coming from above, as intestinal and omental herniæ, and hydrocele of the spermatic cord. If we place a light behind a tumor of this kind, from the nature of its contents it is in a slight degree transparent when the integuments are distended, although I have frequently known the coverings to be sufficiently thickened to render this test fallacious. Sometimes, also, the dark color or turbidness of the contained fluid prevents the transmission of light. A patient was brought to me a few days ago in which this was the case, although the tumor was of moderate size, and had there been no other

mode of determining the disease its real nature would have been overlooked. Nor is this test applicable after a very large size has been attained ; such, for example, as shown by the casts here in my collection. The detection of a fluctuation, the smoothness of the tumor, and the feeling experienced upon handling it, (together with the presence of the spermatic cord above the tumor,) are valuable points to be insisted upon in clinical study, for by these signs alone, in certain cases, you will have to form your diagnosis. Then again, if you grasp the tumor and direct the patient to cough, there is no jar or succession ; whilst there is in hernia.

How shall we cure this disease ? I will speak first of those cases similar to the one before us, viz: Hydrocele of the tunica vaginalis—and of the means employed for its radical cure. I have fairly tried all the operations proposed by authoritative surgeons, and after much experience have a decided preference for the operation with the *tent*, which you have seen me perform. It is accomplished in the simplest manner—always an end to be sought in surgery—and in a few moments. Having selected a space free from any large vein in the anterior face and inferior portion of the tumor, the coverings are here twice pierced with a tenaculum, entering from below and passing out above in order to obtain a fixed point for the operation. The integuments are then forcibly lifted upwards to a conical form, which throws the testicle backwards, if it be in front, and out of the way of the knife ; for should you penetrate this organ it would cause present embarrassment in the operation from hemorrhage, and future trouble to the patient. Then with a sharp pointed curved bistoury I penetrate the tumor below its middle, but parallel with the tenaculum, (the point which I indicate to you now,) and cut upwards and outwards. In this way all the coverings are severed, the fluid discharged, and by means of the hook an entrance into the tunica vaginalis secured. The object now is to bring about such a degree of inflammatory excitement as will change the character of the disease. For this purpose I take a small strip of soft linen, about six

inches in length by one in breadth, and with the handle of the bistoury introduce it to the bottom of the scrotal cavity. In this instance the tent remained in the cavity forty-eight hours, although, usually, a period of twenty-four hours is sufficient to excite that degree of inflammatory action which it is the object of the surgeon to bring about in order to effect a radical cure. Suppuration takes place attended with more or less symptomatic fever, and I have occasionally been obliged to make another opening afterwards to discharge the pus which had collected in the scrotum. It has been asserted of late that no sensible adhesions take place between the serous lining membrane and the testicle after the radical cure has been effected, and this, from the nature of the parts, I am inclined to believe, although I have not had an opportunity of verifying its truth by dissection. However this may be, a recurrence of the hydrocele, after the tent operation has been properly performed, is rare, and the higher degree of inflammation thereby excited seems to be sufficient to restore the normal action of this lubricating membrane in the future.

It is proper for me briefly to describe to you other modes of operation which have been proposed for its radical cure. In the operation by *injection*, a trocar is plunged into the sac, and after the fluid is withdrawn through the canula, stimulating solutions are injected through the canula in order to excite the necessary inflammation. Solutions of various substances have been proposed for this purpose, amongst which are the sulphate of zinc, port wine, and iodine. Some surgeons have preferred to withdraw the injection after it has remained in the cavity a short time, thinking that sufficient irritation will be produced by this procedure; but for the most part they are allowed to remain and undergo absorption during the subsequent inflammatory action. The port wine is used without dilution, and the sulphate of zinc in the proportion of 3 ij to the pint of water. The modern operation, however, and that which has been so highly recommended, and so generally tested in the East by Mr. Martin, (who has operated with it successfully in many instances,) is

is an injection of the tincture of iodine, either pure or with an equal part of water, according as the hydrocele is old and callous, or recent and sensitive. This treatment has not been as successful in my hands, or in those of others in this country, as Mr. Martin found it to be in the East.

Prof. Gross, in his system of surgery, recommends many methods, but when you have read them all there will be great doubt in your mind regarding the one in which he places most confidence. He does not appear to be governed by any fixed principle, but seems to have most reliance on the operation with the injection of iodine and water.

I remember, when a boy, seeing my father perform an operation by *incision*, and afterwards introduce into the cavity common rye dough made up in the usual manner with water. This, you will perceive, would readily adapt itself to the part and might create sufficient inflammation to attain the result required, but whether it did so or not, I do not now remember, for he ultimately went back to the operation with the tent, which I have ever since performed, and in which I have every confidence. If you pass the bistoury in the manner which I have shown and explained to you so as to avoid wounding the testicle, and with proper dexterity successfully introduce the linen tent into the tunica vaginalis, it is a method of cure upon which, in my opinion, you may more implicitly rely than upon any other. In the case before you the scrotum is nearly as large as before the operation was performed, nor is the height of the inflammatory process yet attained ; suppuration has already commenced, and the loose cellular tissue is infiltrated. Notwithstanding this the patient will have but little further trouble, and his cure is certain.*

Hydrocele is a frequent disease according to my observation, and I have found as a point in practice that both its recognition and cure often perplex the general practitioner. One reason of this, undoubtedly, is the difficulties of the dif-

*The man was discharged from the Infirmary on the 16th day of November as cured.

ferential diagnosis. Other diseases incident to this region have more serious import, and this knowledge naturally causes the inexpert to be wary. It is impossible to obtain the tact necessary for a creditable and successful management of the case in any other way than by clinical instruction, or by practice. Most of the cases of exceedingly enlarged or overgrown hydroceles which I have met with have resulted from this fear or want of knowledge on the part of the physician who first had the case in charge.

There are at least two forms of this disease for the cure of which the operation with the tent as described is neither applicable nor necessary: first, where it is voluminous, and secondly, the hydrocele as ordinarily found in children. The expedient I usually adopt in the first instance is to endeavor to reduce it to an ordinary hydrocele. After tapping it with a trocar the stylet is withdrawn and the canula secured in its situation for some hours by means of adhesive strips. This acts as an irritant, and I have known a few instances where a radical cure has resulted from this operation alone. But if the parts are sensitive the canula should be removed when the cavity is emptied, and in either case (with the rare exceptions mentioned) a gradual reaccumulation of the water ensues. When this has reached a moderate size the cure can then be effected with the tent operation.

It is a frequent occurrence for children to be brought to my office with hydrocele—some of them are recent, whilst others are quite large—and more than half the number have been injured by wearing trusses, under the impression that the disease was hernia. Setons of silk or wire, either of iron or some other metal, have been recommended for such cases, but they are unnecessary. If a few punctures with the lancet (say five or six) be made, sufficient inflammation will be excited to effect the desired result; but should a reaccumulation of the water take place, repeat this simple operation until a cure is obtained.

ART. II.—CASES OF RETROVERSION OF THE UTERUS.

BY SAMUEL T. KNIGHT, M. D.,

OF BALTIMORE.

If any apology is considered necessary for the publication of the following cases, it may be found in the errors of practice to which the patients were submitted, and which might have been easily avoided by an early diagnosis. There are few physicians engaged in an active general practice whose habit is to refer frequently to the larger works devoted to special diseases, and hence it happens that cases of rare occurrence are occasionally overlooked.

It may be advanced as one of the arguments in favor of serial literature, that through it many ideas or practical points may be presented at an opportune moment to meet an existing emergency. Had the writer been as well acquainted with the lesion about to be described when the first case came under his observation as he now is, both the life of the patient and much professional perplexity might have been saved.

CASE 1—April 7, 1847. Mrs. ——, aged 32. Mother of four children. Complained of pains, which had increased rapidly for some days, in the hypogastric and lumbar regions, accompanied with constipation of the bowels, and hard straining at stool; she felt a bearing down of the womb, had irregular discharges of blood from the vagina, and, as she supposed, great difficulty in *retaining* her urine, which passed from her almost constantly in small quantities. These symptoms had caused excruciating torment during the past night, so that her pulse was feeble, her mind dispirited, and her countenance well expressive of such sufferings. She did not consider herself pregnant.

Externally a large tumor could be felt extending nearly to the umbilicus, and internally the vagina seemed completely occupied by the same tumor. The os and cervix uteri could not be reached. The examination was continued in several

ways most attentively, with a view to discover the nature of the disease, but no separation between the tumor in the pelvis and that in the abdomen could be distinguished. Notwithstanding the *stillicidium urinæ*, a female catheter was introduced into the urethra to the usual depth, through which only a small quantity of highly ammoniacal urine flowed. The ordinary expedients of practitioners were resorted to, viz: cathartics and anodynes—both gave temporary relief, but only to the mind. An eminent accoucheur of this city was called in consultation, and, by our united counsel, the patient was treated for several days, *secundem artem*, with leeches, fomentations, attempts at catheterism, full anodynes, &c., &c. To Dr. F. E. Chatard belongs the credit of relieving the patient and demonstrating to us what we should have known. The prominent symptoms were, large abdominal tumor, giving the appearance of advanced pregnancy; apparently the same tumor continuous low down to the floor of the pelvis; os and *cervix uteri* perfectly concealed; sanguineous discharge from the vagina; bowels responding to cathartics; catheter repeatedly introduced through the urethra bringing away foetid urine in small quantity. Dr. Chatard introduced a male catheter into the *bladder*, and the amount of water withdrawn proved the over-distention of this viscus. The os tincæ could then be felt looking upwards and forwards, and sufficiently dilated to permit the constant flow of blood. The uterus was completely retroverted, and being replaced, expelled during the next day a three months' foetus.* All subsequent efforts to rally the patient were unavailing.

CASE 2—February 2, 1860—Mrs. M. B —, aged 38, had during twenty years of married life given birth to seven children. Her health had been good prior to her last confinement, which happened two years and a half from date. She was attended in this labor by a midwife. The child died on the ninth day, after which she was confined to bed one

*Whether the retroversion of the uterus was the primary lesion causing the retention of urine or vice versa is a matter for conjecture.

month with phlegmasia alba dolens, for the relief of which no amount of purgative medicine was spared. During this time large coagulæ passed from the uterus. An attempt to establish convalescence at the end of the month failed, and during the next three months the further assistance of an empiric of the Homœopathic school was declined in order that she might be relieved of constipation.

The several physicians having charge of her case during the next fourteen months obtained no better permanent success, because they did not recognize the real source of trouble. Some thought it "change of life," others "dyspepsia," "hepatic disease," &c. The only temporary amelioration was found in the constant use of drastic purgatives, which relieved the mind but injured the body. The general condition of the patient can be easily imagined. She had cephalalgia, nausea, jaundice, hectic fever, night-sweats, depression, cough, dyspnoea and emaciation. The disturbances of a local character were straining at stool with dysenteric discharges; profuse and irregular menstruation; leucorrhœa; hermorrhoids; varices in the thighs, and a hard irregular schirrous feeling tumor occupying the left lumbar and iliac regions of the abdomen. These were formidable symptoms and certainly pointing to a fatal termination had not the cause been removed. The preceding case furnished the precedent for the diagnosis. A vaginal and rectal examination revealed a retroversion of the uterus, the most complete I have met with in a practice of nearly a quarter of a century. The fundus almost pressed upon the perinæum, and was here impacted by the accumulated fæcal matter in the rectum above, whilst the cervix uteri was high up behind the symphysis pubis. Although the parts were sensitive, the reduction was accomplished at once by the following manipulation: Steady pressure with two fingers upon the fundus uteri in the rectum, together with traction of one finger of the other hand around its cervix in the vagina. The time and fatigue in performing this operation were considerable, and the righting of the uterus was disclosed by as audible a "snap" as is usual in

the reduction of a dislocated joint. The patient suffered, meanwhile, with syncope and nausea, which were relieved by the administration of diffusible stimuli. Olive oil given by the mouth, and warm emollient enemata, were selected as the means of diminishing the abdominal tumor which consisted entirely of impacted faeces in the large intestine. The amount of scybalæ passed was enormous, after which the improvement was steady, and the cure is now complete. To prevent a recurrence of the retroversion a gutta percha ring-pessary was for a long time worn in the vagina. The probable cause of this displacement was the imprudent use of drastic purgatives too soon after labor.

CASE 3—November 26, 1860: Mrs. C. H——, aged 24 years, and having a remarkably symmetrical figure, was married two years ago, and left, when pregnant, by her husband, after a few weeks of married life. An abortion of a three months' foetus occurred, after which accident she only retained the horizontal position one day. Her symptoms during the first year thereafter were principally of a local character, being constipation of the bowels and continued uneasiness in the uterine region. Emaciation and debility followed, and such acute pain when stepping off the curb-stones, or from any other jar in walking, that she was finally obliged to remain permanently in bed. Several physicians had charge of her case, but none of them detected the cause of trouble.

The retroversion of the fundus uteri with retroflexion of the cervix, (which is abnormally long,) is well marked and perfectly portrayed in figure 31, page 325, American edition of Dr. F. Churchill's Midwifery. Owing to the suppleness of the cervix the attempts to remove this retroversion have as yet been unsuccessful. And, indeed, so far, no feasible mode has been suggested to accomplish this object. The hope is that the habit of life to which the patient is recommended will continue to diminish the volume of the fundus and allow of its reduction in time. These habits are the daily use of cold water injections into the rectum, together with the prone position, and elevation of the hips at night.

ART. III.—TRAUMATIC TETANUS—INOCULATION WITH CORRO-
VAL—DEATH.

BY EDWARD F. MILHOLLAND, M. D.

Resident Physician at the Baltimore Infirmary.

Trueman Pratt—colored boy—aged 13, was admitted into the Baltimore Infirmary, October 23d, on account of fracture of the humerus, and subsequent mortification of the hand and fore-arm.

Eight days previously to his admission a wagon had passed over the arm, fracturing the humerus at its middle third. The fracture had been reduced and bandages applied in the usual manner. The boy was then sent to Baltimore, his mother being told to apply to a physician in case swelling occurred, or the arm from any cause became painful. This she neglected to do, and in consequence of swelling ensuing the circulation became impeded and mortification supervened.

On his admission to the Infirmary, the dressings were removed, and it was discovered that the arm and hand were enormously swollen and freely discharging serum from numerous fissures in the soft parts. The hand was cold and entirely devoid of sensibility. A short distance above the wrist-joint sensation was present, but in a greatly diminished degree.

Prof. Smith, who had charge of the case, decided to wait till the line of demarkation was more distinctly drawn before performing amputation.

On the 27th it was decided to operate. At this time vitality had disappeared from all the parts below the elbow. The limb was accordingly removed at the seat of the fracture, which was a transverse one. The vessels were very much enlarged, and a considerable amount of blood was lost before they were all secured. The patient was under the influence of chloroform when the amputation was performed. He rallied well, and when he was removed to his bed was in excellent condition.

On the 29th, about 9 A. M., he complained of difficulty in swallowing and of soreness about the throat. An hour afterwards there was some stiffness about the muscles of the jaw. He was told to put out his tongue, which he did with great difficulty, and on attempting to retract it, it was caught between the teeth. There were no other very well marked spasms, except a slight degree of opisthotonus, till the following morning.

He was ordered extract of cannabis indica in one grain doses every two hours, the quantity to be steadily increased if no unpleasant effect supervened. It was subsequently augmented to a grain every hour. Morphia was also administered both by the mouth and by subcutaneous injection. Chloroform was also given by inhalation.

None of these means appearing to produce any benefit, Prof. Smith, at Prof. Hammond's request, turned the case over to him in order that corroval might be employed.

In a memoir read before the Biological Department of the Academy of Natural Sciences of Philadelphia, and published in the American Journal of the Medical Sciences for July, 1859, Prof. Hammond, in conjunction with Dr. S. Weir Mitchell, gave the results of an extensive series of observations relative to the action of this remarkable poison. Among other facts, it was ascertained that the corroval is in a measure antagonistic in its operation to strychnia. Subsequent researches, instituted by Dr. Hammond, served to show that the tetanic spasms induced by strychnia might be entirely prevented by subsequent inoculation with corroval.

With the object of ascertaining whether or not the same effect would be produced upon traumatic tetanus, and as there was no prospect that other remedies would prove of benefit, Prof. Hammond, at 9 A. M., injected two drops of a solution of corroval in water into the cellular tissue of the fore-arm. At the time the operation was performed the pulse was 160 per minute, and the respirations about 75. There was very decided opisthotonus. In three minutes the pulse had fallen to 152. At 9.5, no other effect having been produced, two

more drops were injected. At 9.10 the pulse was 144. It continued at this rate till 9.20, when it began to rise again, and there being no diminution in the intensity of the spasms, two additional drops were injected. The pulse almost immediately fell to 132. The respirations were now 64. The spasms still continuing, and the pulse commencing to increase in frequency, at 9.40 two more drops were injected. At 9.45 the pulse commenced to decline rapidly in rate and force. At 9.47 it was 124; at 9.49, 110; at 9.50, 90. At this time the patient had a violent tetanic spasm, and during its continuance the pulse became intermittent. At 9.55 it was very feeble, and not more than 40. Another spasm more violent than the last ensued, and whilst it endured no pulse could be felt at the wrist. At 10 the patient was quiet—pulse 45. At 10.3 another spasm supervened; no pulse at the wrist, though the heart could still be felt pulsating very irregularly. At 10.7 patient again quiet; pulse regular, and about 30 per minute. At 10.12 another spasm supervened, in the midst of which the patient expired.

From the foregoing case it is seen that the corroval at no time produced the least impression upon the tetanic spasms of the patient, and, were it not sufficiently well established that its action is not to cause convulsions of this character, it might be supposed that the diseased condition was aggravated by the agent employed.

Prof. Hammond was of the opinion that no benefit is to be expected, in cases of this character, from the use of the corroval, and he supposed that death might have been indirectly hastened by the action of the substance in question upon the tissue of the heart. The mode, however, in which this event took place was sufficient to show that it was not due to the immediate effect of the corroval.

The case, he thought, was likewise instructive, as showing how radical a difference exists between traumatic tetanus and tetanus caused by over-doses of strychnia, and should prevent us forming conclusions as to treatment, applicable to both conditions.

ART. IV.—DIPHTHERIA.

BY R. W. I'ANSON, M. D.

OF DINWIDDIE COUNTY, VA.

My attention has been drawn particularly to this disease from articles contained in the journals, and from the importance of the disease itself. During the fall and winter of 1854, it prevailed in Chesterfield county to a considerable extent, and some thirty cases came under my notice. All of these were successfully treated with the exception of one, pneumonia ensued in this and soon terminated its existence. As noticed then, there seemed to be close affinity between diphtheria and scarlatina. Early in the fall the disease was diagnosed as diphtheria, there was no eruption, nor did the fever run high, but toward the beginning of winter eruption was visible and very high fever, so that scarlet fever actually made its appearance. The same disease prevails to a limited extent where I am at this time, but no eruption attends it. What may be the effect of *cold* upon its character I am not prepared to say. Diphtheria is spoken of as being a recent disease, at least such seems to be the opinion entertained by some old practitioners, but such is not the case, for it would be no hard task to adduce testimony of its having prevailed epidemically, from the time of Cullen, (for he describes the disease, eruption and all, under the head of *cynanche maligna*,) in other countries, and also in various portions of the United States. It is also looked upon as being a very fatal disease. This may be the result of several causes: first, either because treated too actively *generally*, or not active enough *locally*; or second, from neglect. If all diseases tended as far as this to prove the power and efficacy of medicine, there would remain no doubts of its utility on the mind of any. It is simply a disease, the course of which is rapid, and like all others of that class should be taken in time—*obsta-principiis* is as true in this as in any other instance. So far as my experience has gone in the management of this affection, the general treatment should be simple;

i. e., an avoidance of every thing *harsh or drastic*. The fever is always of an *asthenic* or *typhous* character, and from the degree of prostration which attends it, shows the system to be primarily effected, or at any rate, very early influenced by the morbific cause. In the beginning an emetic of salt and water given warm, or ipecacuanha, will produce a good influence on the secretions of the throat; and throughout the attack, whenever there is much secretion lodged in the throat, emetics may be used with great relief. After emesis, the bowels should be opened by oil and spirits of turpentine. A stimulating and supporting plan of treatment should now be adopted, such as camphor and quinine—1 to 5 gr. each—with ipecac, avoiding the preparations of opium on account of the disposition to stupor, using the ext. *hyoscyamus* in its stead. Capsicum, used in combination with the powder of camphor and quinine, will be found an excellent remedy. The bowels should be opened with rhubarb or some mild aperient. Diet, nutritious, and in feeble cases, stimulating. There is a tendency toward pneumonia, of course it will be typhoid, small doses of calomel or blue mass must be added to the powder, and given regularly every four hours until the gums are slightly touched; but the main reliance must be placed in *repeated blistering*, both in front and behind the chest. At this stage great advantage will be derived from the use of spirits of turpentine, together with stimulating expectorants, as decoction of seneka and syrup of squills.

Local treatment.—This is of the utmost importance, but no apprehensions of danger on the part of the patient, or friends, or impulsiveness on the part of the practitioner, should impel him to make too *free* use of irritating articles in the form of washes and gargles. In my hands the nitrate of silver, 20 grs. to the ounce of water, has proved a satisfactory remedy, the throat to be thoroughly mopped once a day for three or four days, when the disease will generally yield, then to be reduced to half its strength and continued *pro ne nata*. In the mean time some mild astringent gargle as alum, vinegar and honey in sage tea; or black pepper,

salt and vinegar may be used, but none of these should be used oftener than three times a day. Whereas, warm milk and water will always be found to be soothing as well as beneficial to the patient, and may be frequently used.

External local treatment.—A pepper poultice is what I generally use ; also, flannel annointed with spirits of turpentine. Should the cervical glands remain enlarged during convalescence, the iodide of potassium used internally will be beneficial. Whenever a disease, as insidious, and yet so fatal as the one under consideration, is known to prevail in one's section, it is necessary that the medical man should be ever on the alert. He should inquire into and even examine every case, especially among children, whatever the complaint may be.

Since the above was written, a case has been under my care which it is gratifying to me to report, for out of fifty or sixty cases of this disease it was the first and only one in which the *croupal* symptom predominated ; and furthermore, as showing to the young and inexperienced physician the utter impossibility of following strictly any plan of treatment—even his own ; but that he should be prepared to treat the case according to the symptoms presented at the time by the disease.

Nov. 16th, 8 o'clock A. M.: Called to see a female child, aged five, previously healthy, fleshy. Saturday night previous had a croupal cough, aphonia complete, but not being confined to bed her parents thought it afflicted with a slight cold and treated it accordingly. The child grew worse on Friday, when I was sent for. Found her with great difficulty in breathing ; chest heaving heavily up and down ; but little fever ; had never complained of her throat ; no external swelling. Upon examination found ten or twelve white patches of false membrane on tonsils. Diagn. diphtheria with croup. Treatment, emetic, ipecac 20 gr., tartar emetic 2 gr., all given during an hour ; vomited several times ; throat mopped with nitrate silver 20 gr. to ounce and extended into trachea ; then cal. 4 gr., ipecac 4 gr., tartar emetic 1 gr., quinine 8 gr. cap-

sicum 8 grs. in 8 powders, one every hour; pepper poultice to throat; left her at $10\frac{1}{2}$ much improved. A gargle of alum, vinegar and honey three times per day.

Saw her at 5 P. M.: Very much improved; can speak a little; had vomited at times; breathes freely and easily; considerable stupor; took all the powders but one; complained of headache. Treatment, cal. 6 grs., ipecac 2 grs., tartar emetic 1 gr., camph. 8 grs., capsicum 4 grs., divided in 4 powders, one every 4 hours through night. Stimulating bath to feet, and pepper poultice to chest—skin acting well.

17th, morning: Not so well as evening before; cough dry; rested well; bowels opened once during night—stool dark. Treatment, emetic, ipecac 20 grs., tartar emetic 3 grs., syrup squills 1 $\frac{1}{3}$, in seneka tea, $\frac{1}{8}$ part every 15 minutes; took all but did not vomit much. Afterwards put her on cal. 8 grs., ipecac 4 grs., camph. 16 grs., ext. hyoscam. 4 grs., capsicum 8 grs., divided in 8 powders, one every 2 hours; after taking two doses, gums being swollen, put off to 4 hours during night. Decoc. seneka and syrup squills, given in 4 hours. Throat mopped twice to-day with solution of nitrate of silver, 20 gr. to ounce. 4 P. M.—Croupal cough, not so dry as in the morning; stupor all the time; had soup twice to-day; air does not enter lungs in front; fever slight; pulse weak; blister in front of chest.

18th, morning: Symptoms entirely relieved; breathes easily; gums sore; change brought about by the combined influence of mercury and the blister—was sudden; bowels opened once—dark and thick; noticed the left nostril almost closed by false membrane; wished to examine the throat, but her father, who fancied himself of the knowing ones, and had frequently given his opinion as to the disease and amount of physic given, positively refused to allow it, and I positively refused to have any thing more to do with the case. When I undertook the case the chances were against me, but diphtheria is more chronic than croup, and the treatment had to be divided between the two diseases. The bowels were never deranged during the whole treatment.

ART. V.—A CASE OF EXTRA UTERINE PREGNANCY.

BY JOHN C. CARTER, M. D.

OF BALTIMORE.

I was called on the evening of the 2d of October to see Frances Miller, (colored) aged *about* 30, who was thought to be in labor.

She informed me she had not felt the child move for about two weeks, and that according to her calculation she was now two months over term.

Menstruation ceased about the 25th of October, 1859. Morning sickness began in December. From these data the inference was she should have been confined about the last of July or the first week in August. Early in August she did experience pains as of approaching labor, not striking however in character, or regular in recurrence. A physician was called, who regarded the phenomena rather in the light of *precursory signs*, and dismissed the case, with the opinion that she would probably be confined within a week's time. All active symptoms however passed away, but the recurrence of painful sensations marked the interval until my first visit. Her condition at this time was unpromising. She was suffering general pain and distress, but not clearly of uterine origin. She was emaciated to a great degree, and also very weak. In addition to her other statements, she informed me that her womb occasionally came down, but that it returned again without assistance. Her abdomen was greatly distended and very tense; the umbilicus pouting; the tumor high up in the abdomen, near the surface of the abdominal walls, and easily movable. The mammae contained a moderate quantity of milk.

On the next day, October 3d, I requested my friend, Dr. G. H. Dare, to see her with me. At this time we found the womb prolapsed; the cervix uteri protruding from the labia externa. The organ was easily replaced, but protruded immediately after each reduction. The os uteri presented upon

examination a great amount of congestion and rigidity, so much so as to render the insertion of the finger quite impossible. Owing to her weak condition no active means were used ; we contented ourselves by putting her upon a strictly tonic treatment, and determined to wait the issue. Three days elapsed in this way with no advance toward a happy termination of the difficulty, when, on Friday night, October 5th, I was called in haste, being informed that the woman was in what her friends styled "a fit." I found her just recovering from a pretty severe spasmodyc seizure. I now called in consultation my friend Dr. Gough, who, after repeated efforts, succeeded in dilating the os sufficiently to allow the insertion of two or three fingers. The same difficulty of dilatation occurred at the internal os, but with a less fortunate result, for it steadily resisted every effort.

This was an unfortunate posture of affairs, and allowed no external measures for its relief, owing to the great weakness of the patient, who sank rapidly from this time, and died on Saturday night, October 6th. Death was preceded by delirium, followed by convulsions.

The case presenting many points of interest, a *post mortem* was held on the next day, Sunday. Present, Drs. Gough, C. F. Henser, G. H. Dare, and myself. Dr. Gough conducted the proceedings. When the abdominal walls were divided a large cyst was found, containing a full grown male child, with its cord and placenta entire. The child had been dead, judging from the amount of decomposition present, about three weeks. The cystic walls in the umbilical region were very thin and of a purplish hue ; in their superior portion more dense and inferiorly greatly thickened. Firm adhesions existed between the cystic walls and the peritoneum anteriorly and posteriorly.

Upon removing the uterus with its appendages, it was found entirely separate from and independent of the cyst. In volume the womb was considerably enlarged ; the cervix much elongated ; the uterine walls nearly an inch thick. The os internum showed, by its great congestion and rigidity,

good cause for the fruitless efforts at dilatation. The *cavity* of the womb was about natural. We were unable to ascertain the actual condition of the ovaries, owing to the generally diseased condition of the uterine appendages.

TRANSLATIONS.

ART. I.—ON INVENTION IN THERAPEUTICS.*

BY PROFESSOR FORGET,

OF STRASBURG.

Under the name of "Invention in Therapeutics," or more briefly *New Remedies*, are confounded many very different things, which have nothing in common except novelty, or the appearance of novelty. All remedies are not medicines; moral restraint, gymnastics, uniform diet, are new remedies, or at least reintroduced, but they are not medicines. We propose to speak here of medicines—that is to say, of drugs. New medicines or new drugs are almost all extracted from the three kingdoms of nature in a natural condition, which have always existed, and which have only become medicines from the moment the idea of using them in the treatment of diseases had been conceived. Some of these are indigenous; others are exotic, as cinchona, guiacum, &c. Really new drugs, are those which we produce in our laboratories, and of which we make medicines. Such are chlorine, creosote, chloroform, glycerine, &c.

Such is the *materia medica*—composed of natural and artificial drugs. Let us see the manner in which they have entered or do enter into practice :

* From *Principes de Therapeutique Generale et Speciale*.

1. Some new substances, coming from abroad, as cinchona and monesia, or leaving our laboratories as quinine, morphine, strychnine, &c., are directly employed in therapeutics, on account of the properties which we know them to possess. These are the truly new medicines and the new salts.

2. Some known substances, although strangers in therapeutics, become medicines by virtue of the properties which the mind supposes them to possess, or accident has revealed. Thus cobwebs, olives, cod-liver oil, even chloroform, whose *anesthetic* power was determined sometime after its discovery. This kind of therapeutic invention is very common, since it is within the reach of the first comer who may conceive the idea of using a substance in any disease, in accordance with a preconceived idea, or from pure curiosity. This is the source of most therapeutic mystifications.

3. Substances formerly employed are involuntarily brought to light again. Many of our new remedies—even the most in vogue—are only rehabilitations. Large doses of tartar emetic, belladonna in epilepsy, arsenic in intermittent fever, chlorate of potassa in diseases of the mouth, iodine in strumous affections, &c., are illustrations of these.

4. Known substances, prepared or somewhat modified, are given as preferable to the ordinary form of administration. Thus, calomel in vapor, extract of belladonna by slow evaporation, insufflation of liquids instead of simple vaporization. These are pharmaceutical, rather than therapeutic inventions.

5. A mode of invention, approximating to the last, is the more or less intimate combination of therapeutic elements that had been employed separately. Thus, the iodides of mercury, the valerianates of zinc and quinine, tannate of lead, &c. This is a popular trick, by means of which one persuades or wishes to persuade himself that the two elements combined will be more efficacious than either separately administered, or than the two simply mixed or administered separately—an illusion very seductive to the common run of practitioners.

6. The most vulgar, the commonest, easily accomplished by the lowest medicasters, is that which consists in mixing, most frequently without skill, without principle, without any determined end which is acknowledged, a greater or less number of substances, more or less heterogenous, in the form of tisan, potion, pillules, tincture, electuary, &c.—abnormal products most often, which strike attention even by their singularity, to which the unsuspicuous attribute concealed marvellous properties—products, a large number of which have served to immortalize their authors from the time of the theriac of Andromache. There is a host of powders, balsams, elixirs, unguents, collyria, designated by the names of their authors, who, in other respects, are perfectly unknown.

Thus far we have considered substances clothed with a certain appearance of novelty ; but in the inventions yet to be noticed, *new remedies* are no longer in question, but only *new applications*, which, nevertheless, we comprise under the head of new remedies—new, in fact, as to the circumstances of their application.

7. Here we have to do with the novel employment, in certain diseases, of well known remedies. This is a curious point for study in the history of therapeutics. The ancients, whenever they discovered a new remedy, generally adhered to the first mode of applying it, or some similar application, happy and satisfied with possessing a means more or less specific for this or that affection. Now, the activity which urges us on will not leave us rest within such limits, and all-amorous as we are still of specific remedies, we so torture our new remedies until we raise them to the rank of panaceas. It will suffice to produce some actual illustrations of this fact. Ergot was introduced into therapeutics under the title of an organic specific, determining contractions of the uterus during gestation, and thus favoring the travail of parturition. But puerperal hemorrhages being often the result of uterine inertia, ergot soon became a puerperal hæmostatic. Good sense would indicate the retention of this use. But,

says one, if ergot arrests puerperal hemorrhages, why can it not arrest other uterine hemorrhages? And, lo! without taking account of the mechanical action, ergot is given in all uterine hemorrhages, occasioned by polypi, cancer, &c. From this to its employment in hemorrhages of other organs was but one step, and ergot is now a universal hæmostatic. And this is not all: if ergot checks the blood, why not mucus also? And it is administered not only in the white uterine discharges, but also in all catarrhs, as in all kinds of hemorrhages. Let us go further: ergot acts on the uterus probably by stimulating the nervous system—and now ergot is a remedy used in paralysis. At length, ergot—a uterine specific—has become hæmostatic, anticitarrhal, and a universal nervine.

The history of iodine is still more remarkable. At first introduced as an antigoitrous specific, iodine had much difficulty in being recognized as antiscrofulous; but during the last few years it has taken a prodigious flight, the terminus of which no one can predict. In this new phase it commenced by curing hydrocele; then a bold hand employed it in hydrarthrosis; from thence it was used in ascites; in hydrothorax; pericarditis; hydrophthalmia; and, *Bone Deus!* I believe it has gone as far as hydrocephalus. This is not all: it cures ovarian cysts, cold abscesses, fistulas, carious bones; it disinfects, deters and cicatrizes all sores of a desperate character; it cures diphtheritis, dysentery, &c., &c., and this is what they call a specific remedy!

Almost the same history belongs to subnitrate of bismuth, which was employed in diarrhoea, but which cures now all intestinal and other affections; to chlorate of potassa, which was at first used in salivation, but now cures all affections of the mouth, and several of the digestive tube; to collodion, the simple contracting varnish which, either alone or associated with other substances, cures most acute or chronic exanthems, orchitis, nervous vomitings, and even—peritonitis!—to glycerine, the soothing and relaxing agent, which given internally cures cutaneous inflammations, angina, diph-

theritis, and may be mixed with antipathic, tonic, or other ingredients. It is in a fair way of making food for an universal remedy.

8. Certain innovations simply consist in a modification of dose. It is by such a procedure, practiced in opposite ways, that Rasori by large doses, and Hahnemann by infinitesimal doses, revolutionized therapeutics. But without attaining such results, many practitioners have distinguished themselves by increasing, diminishing or breaking doses. Thus the subnitrate of bismuth, which was given in grains, is now given in grammes; sulphate of quinine, acetate of morphine, often produce their effects in very small doses. Some wish to use sulphate of quinine in a single dose, others, in broken doses.

9. Other innovations consist in the mode of application: Thus the endermic method came into practice. Will the same result be attained by injections into painful tissues of which there is much talk now?

10. Even the time for the administration of remedies constitutes innovations. One gives cinchona as far as possible from, and another as near as possible to, the next attack. The ancients insisted on the necessity of administering all their remedies fasting—and it is a veritable innovation—the received method of giving certain remedies, such as ferruginous preparations, subnitrate of bismuth, cod-liver oil, opium itself, which is to regulate painful digestions—at the table. We can thus see how variable are therapeutic inventions and what are called new remedies, for our ten categories of invention do not represent them all, since some consist simply in the employment of remedies in one form which have before been given in another. Thus medicinal capsules, lozenges, pates, bonbons, &c., are announced as inventions, but rather, it is true, by pharmaceutists than physicians, who, nevertheless, too often have a hand in these industrial operations.

It is easy to perceive how new remedies increase indefinitely and attain such numeric proportions that no practitioner can follow these giddy revolutions, obliging some to

try novelties day after day, and others (who are wisest) to let the current flow by, employing a small number of tried remedies, waiting until the experience of others should positively sanction those methods (occasionally efficacious) which float on the surface of this perpetual deluge. Here a delicate question is involved, with regard to which, as on all subjects, I dare to have my own opinion. We have just seen, and every body knows, that for every hundred therapeutic innovations there is probably not one viable. Do you wish official proof of the statement? Look at the immolations which the reporter on new remedies annually makes at the Academy. You can hear every day *this* repeated, "that when a new remedy is produced it is first the duty of practitioners to believe; it is not right to suspect the knowledge and good faith of the discoverers; that the first thing to be done is to experiment, &c." All of which is a miserable non-sequitur, if not hypocrisy. These false principles have been invented by people interested in managing every body, and who find it advantageous to turn novelties to their advantage. The opposite precepts are true; it is necessary to wait until proof should be furnished before exposing oneself to new deceptions. People are not wanting who will verify the thing; the wise physician abstains if there is danger. Great, indeed, will be your danger if you are caught in the snare; new remedies succeed each other so rapidly that you will scarcely have experimented with one before you must try another. No sooner will you find one good than a better will be proposed, and you will die in your continuous search, having been a dupe all your life, leaving back the souvenir of a superficial practitioner, versatile but without conviction, just because you wish to prove your faith in science.

It is then a dangerous law that a practitioner should be obliged to try every new remedy. This law has been invented by intriguers, whose design is to have themselves spoken of at any price. The practitioner is master of his decisions, and must depend on his own conscience. There are, however, certain rules as regards experimentation, which may be laid down as follows:

1. When a remedy is dangerous *per se* we should wait until other observers have risked the changes of disaster. This was the doctrine of Chomel—the type of a wise practitioner,—as regards the treatment of rheumatism by large doses of sulphate of quinine. After the knowledge had been obtained—the limit of doses had been established, (2 or 3 grammes,) the symptoms which indicate the cessation of its use (quinine intoxication), the cases known in which the remedy is best suited, (those of moderate severity,)—now the sulphate of quinine can be used with great safety. But does it procure more success than other means used in rheumatism? The question is at least doubtful.

2. When a remedy is irrational, bizarre, absurd, as often is the case, the practitioner should leave to others the ridicule of experimentations, that, almost always, end in mystification. Examples are too numerous for citation, and we do not wish to wound any one.

3. When a remedy (somewhat senseless) is innocent, we may always try it, provided we do not fear losing time.

4. When a remedy, otherwise innocent, presents some chances of success, it is well to see what may result from it. Thus collodion is a varnish retentive and constricting, like gutta percha, caoutchouc or even gum, save that it is irritating; thus glycerine, a soothing topical application like the oils from which it is obtained, keeping up prolonged humidity; thus pulverized carbon, detergative and absorbent, if not anti-neuralgic; thus cod-liver oil, at least emollient and nutritive, if not anti-tuberculous; thus chlorate of potassa, intended to abort stomatitis and all kinds of angina, which has lost a little of its prestige, but which, in every case, should not dethrone alum and nitrate of silver; thus subnitrate of bismuth—an antidiarrhoea remedy, which should not make us forget opium, &c. The misfortune is that all these remedies, introduced with pure intentions I admit, are soon turned to commercial advantage and cause honest men to regret that they have lent a hand to impudent speculations. Thus collodion, has been lauded as possessed of im-

possible resolving virtues and has been mixed with substances of all kinds ; thus glycerine, whose end has been reached by making it a wonderful internal remedy and the vehicle of many incompatible substances (tonics, astringents, &c.) under the name of *glyceroles* ; thus pulverized carbon, vended as a miraculous specific ; thus iodized oil, which has tried to dethrone cod-liver oil ; thus chlorate of potassa and sub-nitrate of bismuth, which cure *ad libitum* enteritis, dysentery, nay, even typhoid fever, etc. These are enough to make honest practitioners circumspect, if they do not wish to play the part of dupes.

5. There are some remedies soi-disant new, which present themselves modestly and insidiously, as simple succedanea, which soon attempt to eclipse their companions. Such are most of the alkaloids, (cinchonine, codeine, digitaline, atropine, aconitine, &c.) Such is arsenic, with many other febrifuges that sprout forth daily ; such are compounds of substances used separately, which compounds are asserted to accumulate advantages : valerianates of zinc, atropine, and ammonia ; hydro-ferro-cyanate of ammonia, sulpho-tartrate of quinine, tannate, and valerianate of quinine ; acetate, lactate, tartrate, citrate, &c., of iron, &c., &c. Good sense indicates that these pretentious compounds should not possess more efficacy than their constituents.

6. Finally, there are seductive innovations, rational to the first person that conscience ordered to experiment with them. Such are chloroform as an anaesthetic ; electricity by induction as a nervous stimulant ; perchloride of iron as an astringent ; even iodine, despite the rude attacks to which it has submitted. Such was curare, that some experimenters told us would repress muscular contraction—a dominant element in tetanus—and others are convinced of its want of power. Such is yet all that great class of remedies called *reconstituents* or repairers of the normal elements of the economy ; ferruginous preparations, phosphate of lime, pepsine, &c. —so attractive theoretically, but to which nature so often proves refractory.

The misfortune is that the more chances of success a remedy offers the greater is the ardor with which mercantile cupidity hastens to coin money out of it. Honorable men who were believed to work solely for science and humanity, succumb too often to the bait, and consent to see their names prostituted in the advertising columns of public newspapers. It has been my lot to see my own name stolen by a manufacturer, for an anti-catarrhal syrup, which is nothing else than syrup of acetate of morphia.

If we protest against the deluge of polypharmacy and of drug-charlatanism, it is not from idleness, sterility or a pre-conceived spirit of opposition, but in accordance with conviction based on long and sad experience. Our material interests would tend to suppress rather than provoke an expression of our thoughts.—*L'Union Medicale.*

L. H. S.

ART. II.—URÆMIC AFFECTIONS OF THE INTESTINE.

BY PROF. TREITZ.

1. Nothing surely is so interesting as to see the results of experimental physiology and clinical observation tested and verified by each other.

2. There was reported recently in the “Gazette,” the case of a young man who upon receiving a violent contusion in the occipital region was instantly attacked with diabetes mellitus. This fact was very interesting as being confirmatory of a late experiment of Cl. Bernard, which showed that a slight wound of one of the posterior cerebral organs of an animal was sufficient to cause sugar to appear in the urine.

There are now numerous clinical observations which seem to prove that in uræmia—a state characterized by a special disease of the urinary organs—there are produced in the secretions of the intestine, modifications and alterations strongly analogous to those which experimenters have observed in animals subjected to nephrotomy. The animals on which

nephrotomy was practiced, vomited a fluid charged with ammonical salts. Their health did not appear to suffer so long as ammonia was eliminated by the stomach in sufficient quantity, and without hindrance ; but it was impaired in proportion as this elimination was diminished.

The urea, not escaping so quickly by the intestinal mucous membrane as by the urinary organs, accumulated in the system, and the animals died in convulsions when this product was collected in too large quantity. On making an autopsy a fluid was found in the stomach and intestines charged with ammoniacal salts.

The intestinal mucous membrane then has for some time at least a supplementary action in the secretion of urine, when the kidneys cease to furnish this secretion. Now in uræmic subjects all liquids effused into the intestine have an ammonical odor, and they present a strongly alkaline reaction. If this odor is lessened by prolonged exposure to the air, it is easily made to reappear by adding to the liquid some potassa lye.

It is apparently to the corrosive action of this liquid that the peculiar lesions, found in the intestines of uræmic subjects, are to be attributed—lesions which have hitherto been little dwelt upon.

Among the disturbances of the digestive functions which so often accompany Bright's disease, vomiting has chiefly attracted the attention of observers. It is generally thought at present that this symptom is to be ascribed to uræmic infection of the blood. The anatomical lesions of the intestine are much less known : the colliquative serous diarrhoea has been described, but its cause has not been pointed out. Yet, Malmstein has described a chronic ulcerous or pseudo-membranous inflammation of the large intestine ; Christiansen has seen diphtheritic inflammation ; and Frerichs speaks as follows of the obstinate diarrhoea that often occurs in the advanced periods of the malady : “ In Bright's disease the intestinal mucous membrane is often the seat of serous effusion, and in some cases of hyperæmia and follicular ulcerations.” These

statements do not touch upon the connection between the lesions described and uræmia. It is to the study of this connection that Prof. Treitz has devoted his attention.

The author has extended his observations to 209 autopsies ; in no case was Bright's disease complicated with any affection capable of producing a morbid state of the alimentary canal, (as disease of the liver, cancer of the abdominal viscera, puerperal fever, tubercles, &c.) The intestines were rarely found in a healthy state. Generally they were filled with greyish mucosities—extremely viscous, and so adherent that they could be detached only by scraping. The mucous membrane was very thick, and its epithelium softened, and there was a well-marked uræmic condition. In the large intestine there was at times a leaden or blackish discoloration, especially around the orifices of the follicles, which were much more voluminous than ordinarily. The fecal matters were surrounded with a mucous coating.

The corrosive action of the ammonia sometimes manifests itself by very different and deeper lesions. True eschars are found exactly resembling those that result from powerful cauterization ; they are situated chiefly in the parts near the anus, and rarely extend as far as the upper portions of the small intestine ; they always occupy the most prominent folds ; they are sometimes round and sometimes elongated, and extend over about a square inch of surface ; occasionally they penetrate to the muscular coat ; the surrounding portions of the mucous membrane are of a deep red color, and are tumefied. Perforation of the intestine appears to be more common in these cases than in typhoid fever.

In some cases cicatrices are found, but they are very much like those that are met with in subjects who have had typhoid fever.

Other ulcerations have been met with commencing in the ascending colon : here a number of superficial cicatrices have been seen of from 2 to 4 millimetres in extent—smooth and glossy at the bottom, like tendinous tissue, and with slightly contracted edges.

The peritoneal investment was thickened, and covered with organized pseudo-membranous patches. These ulcerations and cicatrices which seem to indicate alternations of acuteness and of remission in the disease, are to be explained by the production and subsequent disappearance of ammonia at different intervals.

The ulcerations were generally deeper and more extensive at the points where the intestine changed its course, and where consequently the liquid was delayed in its passage longer than at other places. Here the loss of substance laid bare the sub-mucous membrane, which had a whitish and washed appearance. This loss of substance did not seem to result from true inflammation, but rather from softening of the mucous coat by liquids charged with ammonia.

3. It remains to be ascertained whether the formation of these compounds of ammonia which produce such lesions takes place only in the stomach, or whether it occurs in the whole extent of the digestive canal. It seems to be well established that the ammoniacal compounds found in the stomachs of animals from which the kidneys have been removed, arise from the decomposition of the urea deposited there ; and as urea accumulates in the blood, when the urinary secretion is arrested, (a fact put beyond all doubt by the researches of numerous experimenters,) this product must necessarily be found in the various fluids derived from the blood.

The presence of urea, which has been ascertained a great number of times, is not due to any incomprehensible metastasis, but simply to the extreme difficulty of this product.

But in most of the products of secretion urea is decomposed, or at least is converted into carbonate of ammonia only very slowly. Is this true of the urea deposited in the alimentary canal ? When urea is introduced into the vein of a healthy animal, it is rapidly eliminated by the urine, and does not appear in the intestinal secretion ; but this can no longer be so, when the urinary secretion is arrested by an artificial or pathological lesion. In this case the blood is saturated with urea, and the secretions derived from it must give evidence

of the saturation. The urea then is excreted into the intestine, and as it is in contact with bodies already in a state of decomposition, it is quickly converted into carbonate of ammonia.

The possibility of this change has been proved by experiment: Two dogs were, so to speak, saturated with urea, and then killed. Carbonate of ammonia was found not only in the stomach, but in the small intestines, while the blood contained none, though it was rich in urea.

4. It may then be admitted without hesitation that in Bright's disease urea is poured into the alimentary canal, and that there only it is converted into carbonate of ammonia. Moreover analogous decompositions present themselves elsewhere; for example, in the saliva. In four cases the buccal mucous membrane was the seat of mortification like that of the intestine. The salts of ammonia are found also in the fluid of ascites; and this proves that they are not produced by a cadaveric change; since they exist in the fluid drawn from the peritoneal cavity during life. As soon as urea is decomposed in the alimentary canal into carbonate of ammonia, this substance will pass directly into the mass of the blood, in consequence of the absorption that is constantly going on upon the walls of the organ. Thence results that series of grave symptoms, ascribed sometimes to the presence of urea in the blood, in reality due to the ammoniacal infection of that fluid.

5. The alimentary canal is then, in Bright's disease, the point of origin of the uræmic symptoms; the intestinal affections precede the uræmia; they are the first effects of the presence of carbonate of ammonia in the intestine. The vomiting of ammoniacal matters and the diarrhoea are the symptoms of these affections, and not of uræmia. The uræmia occurs subsequently. The presence of even a large quantity of urea does not give rise to any of those phenomena called uræmic; on the other hand, the injection of a solution of carbonate of ammonia into the veins very speedily produces uræmic symptoms.

It would then be more accurate to call the infection of the blood that gives rise to these symptoms—*ammoniæmia*; and to reserve the word *uræmia* for the accumulation of urea in the blood, to which none of the phenomena described are ever owing.—*Journal des Connaisances Médicales.*

S. C. C.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

I. *Chemistry in its Relations to Physiology and Medicine.*

By GEO. E. DAY, M. A., Cant., M. D., F. R. S. London: H. Baillière. 1860.

The announcement of a new work on physiological chemistry, the most progressive branch of medical science, will at once attract the attention of the profession, particularly when it is known that the author is Dr. Day, of St. Andrews. No living writer has probably done more to advance our knowledge of chemistry as applied to physiology and practical medicine. The medical world in England and America owe him a debt of gratitude for having given them, in 1845, a translation of J. Franz Simon's great treatise on Animal Chemistry through the old Sydenham Society, and for rendering into English, in 1855, Lehmann's Physiological Chemistry, which afterwards appeared in the United States, edited by Prof. R. E. Rogers. Dr. Day is, moreover, well known for his edition of Vogel's work on Pathological Anatomy, and for his articles and reviews in the British and Foreign Medico-Chirurgical Review, all of which have been connected, in a greater or less degree, with this, his favorite study.

In his preface, Dr. Day states that he has endeavored to comprehend, in a reasonable space, all the important departments of physiological chemistry. He does not pretend to have conducted experimental researches himself, but he candidly gives us to understand, that he has borrowed from the more recent publications of Lehmann, Robin and Verdeil, Neubauer and Vogel, Bidder and Schmidt, Frerichs, and Bishoff; and we find that he quotes frequently the investigations of Brown-Séquard, Bernard, Hammond, and indeed from all the distinguished physiologists of the day. Our author's reputation as a medical scholar, and his familiarity with the productions of men of science, is a sufficient guarantee of his ability to undertake such a work as the one before us; and he has, in fact, admirably succeeded in giving us, in an accessible and acceptable form, the state of the science of living chemistry as at present held and taught. And rapid has been its progress. Although there is still left ample field for investigation, yet it has advanced sufficiently far to reveal to us many of the heretofore hidden, secret workings of the vital machinery, and to encourage us to dive deeper still into the human currents. Had our forefathers of the last generation known, how intimately connected every part of the organism is with every other part and to the whole; their mutual dependence upon one another; and how easily convertible the solids and the fluids are into each other; and, still more, how unceasingly they are actually so converted in assimilation, and retrogressive metamorphosis, they would have realized, how utterly untenable were the doctrines of their sects—of solidists and humoralists—who wasted so much valuable time and talent in vigorously contending, that the morbid causes were exclusively located in one part or structure of the body. Still more unphilosophical were the doctrines of the ancients (including Stahl and Dr. Martyn Paine) in regard to Psycho-Vitalism. They would have seen, what is now everywhere admitted, that any interruption to the normal, regular composition, structure or function of any one part, be it fluid or solid, or of its molecular changes, commu-

nicates, with electric rapidity and certainty, the shock to the whole structure, and deranges its vast network of functional operations.

Dr. Day divides the subject matter of his work into three heads :—1st. Organic substrata of the animal; the proximate principles entering into the composition of the solids and fluids of the organism. 2d. The chemistry of the animal juices. 3d. The zoo-chemical processes.

These, again, are subdivided into twenty chapters, in which we have given us, in as concise a form as the importance of the subject would admit of, the most recent views in relation to the chemical phenomena attending the vital processes, as well as the physiological position of nearly every substance found in the organism.

One attractive feature of Dr. Day's treatise is its conciseness, and the clearness of his judgment in separating facts from the damaging entanglement with theories, together with the avoidance of unnecessary discussion of unsettled questions, which he frankly admits to be so.

In the first chapter, among the non-nitrogenous acids, we find the important Oxalic Acid, never found in the animal organism except in combination with lime. A few years since, when Golding Bird first drew the attention of observers to oxaluria, it was supposed that the presence of the crystals of oxalate of lime in the urine indicated disease, and the journals of the day contained numerous cases of oxalic acid diathesis. Lehmann upset these views by proving that oxalate of lime was a healthy ingredient of the urinary secretion. This any one can substantiate by exposing the urine to a temperature below 32° F., by which means the water alone freezes, the urine becomes slowly concentrated and the crystals are found in the deposit, in the easily recognized form of octahedra. Dr. Day further states that this same salt is found in morbid blood, is often present in the mucus of the gall-bladder, and is scarcely ever absent from the mucous membrane of the impregnated uterus. The origin of the oxalate of lime he traces to various sources, and

admits that the oxalic acid of the food, especially of certain alkaline vegetables, can be transmitted to the urine. He speaks, as do M.M. Robin and Verdeil, of the marked increased excretion of this salt after the use of drinks, rich in carbonic acid, or containing alkaline carbonates, or anything that can overload the blood with carbonic acid. This is in accordance with another well established fact, as he says, that wherever the respiratory process is affected, or the metamorphosis of the tissues is deranged, causing an accumulation of carbonic acid in the blood, oxalate of lime may always be found, more or less abundantly, in the urine. Thus it has been observed in pulmonary emphysema and in the convalescent stage of typhus.

Moreover, since the discovery that uric acid can be decomposed by an oxidising agent into urea, allantoine and oxalic acid, it has been commonly assumed that the oxalic acid in this case is due to an oxidation of uric acid, which is not further oxidized into carbonic acid. In confirmation of this view, Dr. Day quotes both Frerichs' and Neubauer's experiments of injecting urates into the blood, and uric acid into the stomachs of rabbits.

Dr. Day's chapter on Uric Acid is of much interest. He admits it to be, not only a normal constituent of the human urine, in which it amounts to about 0.1% , but he says it occurs in minute traces in the healthy blood, and is present in excess in cases of gout and Bright's disease, but is not increased in rheumatism. He further states that it has been found in excessive quantity in cholera, bronchitis and pneumonia. Dr. Hammond's valuable observations, as published in 1855, are quoted as showing that exercise diminishes very materially the excretion of uric acid. It will be remembered that in those experiments the amount excreted, while the body was in repose, rose to as much as 24.9 grains, whereas, when the amount of exercise was increased, it fell to 8.2 grains. In accordance with the views of Liebig, uric acid, like urea, is regarded as essentially a product of excretion, and as a substance one degree higher than the latter in the retrograde metamorphosis of tissue.

In regard to the controversy as to the origin of urea, perhaps the most important ingredient of the urine, Dr. Day does not express any positive opinion. He does not say, whether he believes it to be derived in any degree from the nitrogenous ingesta as well as from the tissues, but he gives Lehmann's views with his reasons for them, which appear to us, to be nearly conclusive in favor of the two sources. Dr. Day, in speaking of the delicacy of Garrod's thread-test for uric acid in the blood, says that the serum must be perfectly fresh, otherwise the acid soon decomposes, oxalic acid being one of its products.

We commend especially to the believers in Liebig's theory of the mere accessory position of oleaginous articles of food, the chapter on the "uses of fat," in which Lewes' views* of their vital importance as nutritious matter are clearly affirmed. In addition to their value as physical protectors, as bad conductors of heat, as exciting and supporting the animal heat, and as contributing essentially to the formation of bile, he speaks of them :

"As active agents in the metamorphosis of animal matter. Lehmann ascertained, in experiments on lactic fermentation, that the process cannot be excited in saccharine or amylaceous fluids by albuminous bodies, excepting with the co-operation of fat. He likewise found that a certain, although a small, quantity of fat was indispensable to the metamorphosis and solution of nitrogenous food during gastric digestion—a fact which has received confirmation from the observation that, in experiments on artificial digestion, the solution of substances used as food is considerably accelerated by the presence of a little fat. The occurrence of fat in the egg, in pus, in all plastic exudations, and in all highly cellular organs, is a clear indication that this substance plays an important part in the process of cell formation ; and no animal cell or cell-yielding plasma has ever been observed into which fat does not enter as a constituent."

Such being the important rôle of fat, is it to be wondered at that cod-liver oil, the most assimilable of all fats, should have so decided an influence in improving the nutrition in

* "Physiology of Common Life."

Tuberculosis, as to enable the blood-vessels, instead of depositing amorphous corpustles, to generate healthy cell formations!

In a work, otherwise so complete, we are surprised that our author should have admitted, without reserve, the glucogenic function of the liver as originally propounded by Bernard, as though it were an established fact which had not been controverted. He utterly ignores M. Figuier's views, which have been confirmed by the researches of such eminent physiologists as Colin and Chauveau, showing by the very same tests which Bernard used, that the portal vein does contain sugar as well as the hepatic vein and the right side of the heart. M. Sanson further showed, that the origin of human sugar was external to the body and unique, being derived exclusively from amylaceous matter, the vegetable creating the principle, whereas the animal changed and destroyed it by converting it successively from starch into glycogène or hepatine, dextrine, sugar, and carbonic acid and water. Dr. Day does not even mention the substance glycogène or the experiments of his distinguished countryman, Dr. Pavy, in regard to it. These (although controverted by Harley and Thudichum,) appear to establish the fact, that sugar is never formed or even found as sugar in the liver during life, but, as soon as the vital spark is extinguished, the fermenting process advances, and we have glycogène converted into sugar. It ought to be stated that Bernard still holds that this near relative to sugar exists only in the liver, whereas others prove to demonstration, that it is found in the blood, kidneys, and other organs. This, of course, invalidates Bernard's conclusion that sugar can be derived from protein bodies, because he found it in the liver of animals fed exclusively upon animal food. Notwithstanding these modifications of Bernard's doctrines, they do not detract from the brilliancy of his discovery nor impair its value in throwing light upon the obscure and intricate path to physiological truth.

As tests of sugar, Trommer's is considered the most trustworthy, provided the following precautions are attended to:

"1. If the potash gives rise to a copious precipitate, the solution should be filtered before the addition of the sulphate of copper. 2. The sulphate of copper must be added gradually, and in a dilute state, because the quantity of oxide of copper that can be dissolved is proportional to the amount of sugar which is present. 3. Prolonged heating must be avoided, for there are several animal matters—amongst which we may name the albuminous bodies—which by very prolonged boiling separate a little suboxide of copper from alkaline solutions of oxide of copper. Indeed, when sugar is present, a red or yellow powder of suboxide of copper is usually formed, even without the application of heat if the blue solution be allowed to stand for some time."

We must not hastily diagnose diabetes mellitus when we detect sugar in the urine, because it is now well established that it is occasionally found in other diseases—among which are gout and carbuncle. It is its habitual presence, together with the increase of urine and the general symptoms accompanying it, that reveal to us this wasting and inveterate disorder.

The long chapter on the Blood will be found full of interesting points, to which our limited space does not permit us to more than allude. The value of fibrin and albumen, and their relation to each other, is estimated according to Lehmann's views. We are told that nitrate of potassa, which is generally held to act in inflammations by dissolving the fibrin, and which experiments had proven it to do on healthy fibrin, has been tested by Frerichs and found that it does not so affect the fibrin of inflammation. However, we have left the fact that it, together with other salines, does increase the solids and extractive matters in the urine.

The researches of Dr. Richardson, in his Prize Essay, are given in detail, in regard to ammonia being the agency by which the fibrin is held in solution in the circulating blood, and its escape being the cause of its coagulation. After trying without success the effects of oxygen, hydrogen and

carbonic acid gas, he sought for the volatile alkali in blood-vapor and definitely found it :

" By holding a microscopic glass moistened with pure hydrochloric acid over blood while coagulating, he obtained, on drying the glass, unmistakable crystals of hydrochlorate of ammonia. He also drove the vapor of blood through dilute hydrochloric acid, and by the chloride of platinum test obtained the crystals of the double salt of chloride of ammonium and platinum. Next, on adding ammonia, or neutral carbonate of ammonia to blood, he discovered that newly drawn blood could be thus kept fluid for lengths of time, varying according to the amount of ammonia added, and to conditions under which the blood was placed—*i. e.*, as regarded the possibility of an escape of ammonia and the surrounding temperature. Finally, he succeeded in re-dissolving the blood-clot in serum alkalinified with ammonia, and in re-inducing coagulation on gently driving off the volatile alkali."

These results are, apparently at least, conclusive in favor of Dr. Richardson's discovery.

Nearly one hundred pages of Dr. Day's work are devoted to the Urine, and we find them replete with the facts, now so many in number, which the few last years have furnished. When we reflect on the number of substances, organic and inorganic, which the urinary excretion contains, and upon the varying conditions of ordinary life, and the vast number of circumstances influencing its composition, color and quantity, and the importance of the kidneys as the great depurating organs, we cannot wonder at the time and labor spent in trying to discover its secret and involved history. For the extraordinary changes affected in its composition by our habits, food, dress, &c. &c., we need but refer our readers to the investigations of Roberts, Haughton, Seller and Hammond. These render it no easy matter to appreciate the exact importance of the changes produced by diseases.

If we may venture to say so, we think, in many of the examinations of the urine, the investigators have apparently lost sight of the fact that, the instant the excretion has escaped as urine into the pelvis of the kidneys, it is relieved

from the control, so to speak, of vitality. It is outside of the body and it becomes at once exposed to chemical and organic changes, to which it is so very susceptible from its intricate composition. Even before it is subjected to contact with other substances, it can be changed by food and by medicines from acid to alkaline and *vice versa*. Ordinarily its acidity, due to its acid phosphates and sometimes hippuric and lactic acids, is at its minimum in the forenoon, but increases during meals, and at night it reaches its maximum. Acrid and irritating naturally, and still more so when concentrated in disease, it comes immediately in contact with organic, nitrogenous matter, which can act as ferment.

The mucous surfaces are all covered with mucus, which, analyses have shown, contain epithelial cells, mucous-corpuscles, mucin, besides salts amounting to 0.7 per cent., including chloride of sodium, alkaline carbonates, alkaline phosphates, sulphates, and some earthy phosphates. From its receptacle in the kidney, it passes down its very narrow canal and dripples into the bladder, where it remains, perhaps for hours, in contact with the vesical walls, covered with a mucous membrane having loose, epithelial cells of a different shape floating in it. When voided, it carries with it the mucus it has met with in its journey, including, perhaps, some spermatic fluid, certainly more or less of prostatic and other urethral secretions. We need not refer to the fermenting principle in the shape of a pigment, much less to its urea and its salts. Complex as it is in its composition, and thus exposed to changes, have there not been many hasty conclusions, drawn from its analysis, as to the condition of the whole body, from which some hours previously it had been excreted? We do not wish to question the fact that, most urinary sediments are formed after the fluid has been voided and cooled, and that, generally, its composition is as it was excreted, but to state that changes, and marked ones, do sometimes take place between its collection in the kidney and the time of its emission, and much more frequently than we have heretofore supposed. It is, moreover, a matter of con-

siderable practical importance to decide when such decided alterations do occur.

Previous to Scherer's article on the acid and alkaline urinary fermentations and their connection with urinary sediments, this view had received but little attention. Dr. Day gives Scherer full credit for his views. The important bearing of them upon the pathological signification of deposits in the urine, and upon the formation of urinary calculi tempts us to give briefly a résumé of them to the reader. He says :

"Scherer has unquestionably given the true explanation of the mode of formation of uric-acid sediments, showing that they are solely dependent upon the decomposition of the pigment. In perfectly fresh urine we scarcely ever see a uric acid sediment, but every specimen as it undergoes acid fermentation, sooner or later deposits crystals of free uric acid. The free acid produced (probably) by the action of the vesical mucus on the pigment, decomposes the comparatively insoluble urates, and by combining with a portion of the base, liberates uric acid, which at once crystallizes. There is reason to believe that oxalate of lime is also formed, or at all events separated during this acid fermentation; for while crystals of exalate of lime are very seldom found in a perfectly fresh specimen of urine, they can very often be detected intermingled with uric acid crystals after the fluid has stood for sometime. The acid fermentation having at length reached its maximum, (the time varying from days to even a few weeks,) the free acid gradually disappears, the surface of the fluid becomes covered with thread-like fungi, confervæ and algæ, the reaction becomes neutral, then alkaline, and the crystals of uric acid at length disappear, and are replaced by a mixed sediment of a perfectly different nature. The ammonia produced by the decomposition of the urea throws down the earthy phosphates, the phosphate of lime falling unchanged, and the phosphate of magnesia combining with ammonia to form the beautiful and well-known crystals of phosphate of ammonia and magnesia or triple phosphates. Another portion of the ammonia at the same time combines with the uric acid, which had formed the previous sediment, and gives rise to the production of urate of ammonia. At this stage the urine effervesces on the addition of an acid,

and has almost entirely lost its original yellow tint, in consequence of the decomposition of most or all the pigment—such is the ordinary course of the alkaline fermentation; there are, however, occasional cases in which it occurs much earlier, and without a pre-existing acid fermentation; it may even occur within the urinary bladder, in which case the urine is alkaline at the moment of its emission."

He adds:

"The acid fermentation consists essentially in the production of free acid (lactic or acetic, or both,) from the pigment by the catalytic action of vesical mucus, and gives rise to the deposition of (1) free uric acid; (2) acid urates—chiefly urate of soda; (3) oxalate of lime. The alkaline fermentation is essentially due to the formation of carbonate of ammonia in the urine, which causes the disappearance of the sediment of uric acid, and the replacement of the (1) triple phosphates—ammonia and magnesia; (2) phosphate of lime; (3) urate of ammonia."

He again says:

"These processes may occur within the bladder and other urinary organs, in which case, unless modified by remedial agents, &c., they almost certainly lead to the formation of renal or vesical calculi."

Further on he admits:

"If the urine be very scanty, and does not contain enough water for the purpose of solution, we may have a sediment without any augmentation of the daily or hourly amount of uric acid. Hence we must not conclude from the presence of a sediment of urates, that there is, of necessity, an absolute augmentation of uric acid."

The deposit of urates out of the body is easily accounted for from their greater solubility in hot water, but this does not explain their occasional separation within the body. Vogel suggests that this may arise from urine, saturated at the moment of its secretion with urates, becoming further concentrated in the bladder by a process of endosmosis, and thus throwing down a portion of these salts in a dissolved state. Then, we know that the neutral urates are more soluble than the acid urates, and these more so than

free uric acid. If then the urine be moderately rich in uric acid, any condition which converts the neutral into acid urates will produce a deposit. Dr. Day says :

" We have already seen how such an effect as this may be produced externally to the body in the acid fermentation, and the same may take place also within the body, either by the establishment of acid fermentation within the bladder, (a circumstance probably of rare occurrence,) or by the addition of a strongly acid urine to a faintly acid or alkaline urine, rich in neutral urates, pre-occupying the bladder."

We have seen that it is now admitted, that uric acid is a normal constituent in the blood, and that a deposit of this acid or of its salts does not always occur from excess alone. To be drawn from the blood it must be in solution, and as it is no longer under the control of vital laws, but free to be effected by chemical reaction, the cause of its deposition anywhere in the urinary passages, must be looked for, either in its composition or in the condition of the membrane over which it passes. Ammonia is not a normal constituent of the urine, therefore if we find at the time of the emission of the fluid, it contains urate of ammonia, it must show that decomposition has taken place, having been derived from the urea. What then becomes of our so-called uric-acid diathesis, the increased amount being simply due to a departure from ordinary physiological laws, and the deposit to changes which have taken place in effete organic matter? We have seen how readily the triple phosphates are produced, indeed that phosphoric acid, being a normal constituent of urine, is derived from the blood, and the amount is increased only in one class of diseases, and that is inflammation of the brain itself, it being a phosphorised tissue. Were we not all hasty in talking of the phosphatic diathesis when we found the urine contained those salts?

We have been shown how easily oxalate of lime can occur in the urine, and moreover, that Lehmann, and Robin and Verdeil had demonstrated, as any one now can, that it

is an ingredient of perfectly healthy urine ; yet the authors have written a great deal about oxalic acid diathesis, and we have all been treating them !

Dr. Day does not dwell upon these facts, which we hold are legitimate deductions from what he had concluded from Scherer's views, nor does he seem to have met with the late Prof. Frick's valuable paper, the most suggestive of all his contributions, on the "Formation of Urinary Calculi," which appeared in the American Medical Monthly, of New York, in April, 1858. In this article Dr. Frick acknowledged the error he had fallen into, or, more properly speaking, had been led into, by Golding Bird and other urinary pathologists, of explaining and naming diseases in accordance with the nature and quantity of the various substances contained in the urine. He there states emphatically, that the distinctions into the uric, oxalic and phosphatic diatheses, are no longer tenable.

Dr. Frick not only applied this view to urinary sediments as we find them, but, with his usual clear discernment, he stated we ought thus to explain the formation of calculi—not to argue therefrom that there is an excess of those substances derived from the blood, but that they owe their origin to some local decomposition producing their deposit. This may be coincident with a diminution instead of augmentation, and is produced by the ferment, which can easily be removed by boiling fresh urine, by adding alcohol to it, or still better by filtering it. Dr. Frick calls attention to the fact of how exceedingly common it is to find the phosphates in the urine of persons who, from paralysis or other causes, have lost the ability to empty their bladders, or who have chronic inflammation of the organ. In this latter case an undue amount of altered mucus is secreted, which acting as a ferment upon the urea, produces, as a result, ammonia, by which the acid reaction is removed, and the phosphates at the same time deposited. We must therefore look for the causes of phosphatic calculi almost entirely in the bladder itself, renal calculi being nearly exclusively of oxalate of

lime and uric acid. Again, statistics prove that in England, Holland, and in the north-western part of France, urinary calculi are very common. This, he accounts for, from the fact that in those countries there is an unusually great humidity of the atmosphere, which we know has an irritating effect (indirectly) upon all the mucous surfaces, but especially upon that of the urinary organs, by interfering with the normal action of the skin, and thus giving the kidneys extra duty, and altering the mucous epithelium either in quantity or quality. Moreover, analyses of calculi have shown they often contain much animal matter, sometimes as nuclei, in the shape of clots of blood, mucus, or epithelium. And calculi are frequently met with where there has been stricture of the urethra, disease of the prostate, or organic disease of the kidneys, ureters, or bladder. Then again, it has been long observed, that foreign substances in the bladder act almost invariably the part of nuclei of calculi.

These facts all appear to render Dr. Frick's views correct in attributing to morbid secretions, whether blood, albumen or epithelium, resulting from chronic or acute irritation of the bladder, the credit of the formation of calculi, and not, as has been generally supposed heretofore, to the composition of the urinary secretion itself.

It is not to be understood that deposits of the voided urine and calculi are never caused by the altered composition of the kidney secretion, but that the condition and contents of the passages may and often do produce them.

The great and important bearing these views and doctrines of Scherer, Day, and Frick have upon our treatment of such cases will be apparent to the reader. Instead of administering alkalis in some cases and acids in others to correct diatheses, which do not exist, we must search deeper and ascertain where the trouble is, and try to address our remedial agents to the urinary passages themselves, and thus prevent the formation or re-formation of urinary sediments or calculi.

We are unable to do more than to call attention to the chapters on "The Metamorphoses of Tissues" and to that on

"Nutrition," perhaps the most complete and important in the volume. We hope the remarks upon the nutritive value of the different articles of food may meet the eye of Miss Nightingale before the next edition of her "Notes on Nursing" appears, for she cannot fail to find there some suggestive hints of value, particularly in Dr. Hammond's experiments on albumen, starch, &c., which Dr. Day has properly appreciated by inserting their conclusions at length in his volume. The same physiologist's investigations on the physiological effects of alcohol and tobacco are also given, and we may be permitted to add, that such researches are of more value than all that Carpenter and Dr. Miller* of Edinburgh, may imagine to be the effects of alcohol; and that Lizars† and Sir Benjamin Brodie‡ may issue their counter-blasts, like King James of old, against tobacco, but they do not impress the scientific world or really add to our fund of information, as much as if they had given some such well conducted experiments.

We question whether Mr. Lewes will be entirely satisfied with this volume, although the author recognizes the fact, that he is working in a "vital laboratory," and he does not pretend that chemistry is competent to solve "physiological riddles," but we think he has demonstrated, what an indispensable aid it affords in interpreting them. F. D.

II. *Archives of Medicine, etc.* Edited by LIONEL S. BEALE, M. B., F. R. S., etc. London: 1860. No. V.

The Archives of Medicine, which was commenced in London about three years since by Dr. Beale, has reached its fifth number, two numbers being published in each year. It is a journal devoted almost entirely to practical observations

* Alcohol, its place and power.

† Tobacco, its use and abuse.

‡ Letter in the *Medical Times and Gazette* on Tobacco.

in anatomy, physiology and pathology, and although many articles which have appeared in its pages are somewhat puerile in their character, many, on the other hand, are both of high scientific and practical value.

The present number commences the third volume, and, as it contains several articles of importance, we propose bringing it under the notice of our readers.

The first paper relates to a case of leucocythemia, and is reported by Dr. J. M. Barry. The patient was admitted into the Tunbridge Wells Infirmary, January 11, 1859, with great enlargement of the spleen. This organ occupied the whole left side of the abdomen from above the ribs to Poupart's ligament. There were anorexia, indigestion, diarrhoea, abdominal distension, and disturbed unrefreshing sleep. The patient had not lived in marshy districts and never had ague. The liver also was enlarged. There were neither fluctuation nor oedema to be perceived. Pulse 80, weak, regular. Tongue clean. About three pints of urine passed in the twenty-four hours, usually turbid from the presence of urates, not albuminous, sp. gr. 1015—1018.

The blood when examined under the microscope was found to contain an increased number of white corpuscles.

Nourishing diet, iodide of iron, sulphate of iron, with extracts of aloes and henbane were ordered, and compound ointment of iodine was directed to be rubbed over the left side of the abdomen.

Under this treatment the general health improved, but the abdominal enlargement increased. The bromide of potassium was now ordered, but no permanent effect was produced. The colorless corpuscles continued to increase in number. On the 4th of July the patient left the infirmary. After his return home he continued for two or three weeks in the same condition as when he left the infirmary. Then his strength began to fail rapidly, his face, legs and scrotum became puffed, and very soon general dropsy set in. Diuretics were employed but the dropsy continued to increase, and death ensued on the 9th of August.

The *post mortem* examination was made eighteen hours after death. The principal appearances observed were venous congestion of all the viscera of the abdomen, especially of the liver, and great enlargement of the spleen. This latter organ measured twenty-eight inches in its vertical circumference, and sixteen inches around its greatest breadth. Its texture was firm. There was a small globular accessory spleen about the size of a walnut. The gall-bladder was atrophied, and contained only a little mucus. The cystic duct was impervious. The abdominal cavity contained about a gallon of dark colored serum. The kidneys were large, congested and of dark color.

In regard to this case it will be remarked that the bromide of potassium was found to possess no influence in reducing the size of the spleen, its action therefore not being in accordance with the opinion of Dr. Robert Williams, who asserted its great power in this respect.

The obliteration of the cystic duct is also important, as the same circumstance has been noticed in other cases of leucocythemia, and may have some bearing upon the exact pathology of the disease.

The next paper gives the details of a case of diabetes insipidus, an affection which, in our opinion, hardly deserves the name of a disease. It is generally dependent upon the imbibition of large quantities of water, and when the patient stops drinking to excess, he stops urinating to excess. The reporter of the case, Dr. Peter Eade, seems to think otherwise.

The third paper is by Dr. J. Warburton Begbie, and consists of the *narrative of a case in which malformation of the pulmonary valves gave rise to remarkable cardiac sounds*. This paper is of so important a character that we extract it entire :

At a meeting of the Medico-Chirurgical Society of Edinburgh on the 16th of November, 1859, Dr. Haldane, Pathologist to the Royal Infirmary, exhibited a heart which had been removed by him from the body of a patient on the 14th of the same month. In examining this heart, the valves of the pulmonary artery were tested by a stream of water, and

were found to be slightly incompetent. There were four valves, three of about the ordinary size, the fourth much smaller than the others, and imperfectly separated from one of them. The other valves of the heart were healthy, and the organ was of its natural dimensions.* The heart, the description of the abnormal appearances, in which I have given very nearly in Dr. Haldane's words, was that of a young man, who for a period of nearly three years had been under my observation, whom I had, times without number, occasionally alone, more frequently in the presence of a clinical class in the Infirmary, examined ; and from the date of the examination, at the commencement of 1857, had believed to labor under some abnormal condition of the arterial valves on the right side of the heart.

W. W., æt. 18, consulted me in the very early part of 1857, chiefly on account of a slight degree of difficulty in breathing, aggravated on making any forced exertion. In reply to my careful inquiry he stated that he had always considered himself to be " touched " in the breathing, having observed, from his earliest recollection, that he could not run with the same facility as other boys, and that on lifting heavy weights he was very soon fatigued and caused to " pant."

At eighteen when I first saw the patient, he had no appearance of suffering from bad health, was then able for the duties of a light porter, and admitted that he had applied for medical advice from no feeling of increase in the difficulty of breathing and slight palpitation which from boyhood he had suffered, but in the hope that these his old symptoms might be subdued.

When W. removed his clothes to permit a careful examination of the chest, I was struck by the peculiar appearance of the right arm ; it was much shorter and thinner than the left, a condition which he stated had existed from birth. The left arm was well developed. He was, it is scarcely necessary to add, left-handed. On inspection of the chest a more ample clothing by the pectoral muscles over the left than the right front was at once apparent. Besides this, there existed a decided prominence in the cardiac region. Impulse of the heart, without being decidedly exaggerated, was readily appreciable. Rhythm of heart natural. Apex beat was detected in the normal situation, and there existed no increase of precordial dullness. A very decided thrill ac-

* Proceedings of Medico-Chirurgical Society, Edinburgh Medical Journal, December, 1859.

accompanied the systolic action of the heart, when the hand was applied over the base. On more careful examination, the thrill was found to be almost entirely limited to the situation in which a loud systolic murmur was heard with the greatest degree of intensity. That was at the left border of the sternum, over the cartilage of the third rib. The systolic murmur thus distinguished was blowing in character and of an unusual loudness; in the same situation it was followed by a diastolic murmur of much less intensity. The systolic murmur was readily distinguished over the whole upper part of the chest, but with much facility the seat of its greatest intensity was determined to be that already indicated. The diastolic murmur was limited or almost limited to the same situation. Over the aortic valves something like the normal second sound was from time to time audible. The loud systolic murmur was not propagated in the course of the systemic circulation, for though loudly heard over the upper sternum, it was scarcely appreciable in the carotids. The radial as well as other superficial pulses were normal, no jerking character or trace of visibility distinguished them. The strength of pulse good, average frequency 74. Respiratory murmur of both lungs was feeble, otherwise unaltered. Patient had never suffered from rheumatism, had never spat blood, had little or no cough, and no expectoration. Complained occasionally of drowsiness. Had no appearance of lividity of the countenance. Subsequently to this my first examination, he was on three occasions under my care in the Infirmary, once in 1857, and twice in 1858. Repeatedly examined, the physical signs underwent no change, so that in the notes of his case, I frequently find this remark, "physical signs precisely as before." The slight breathlessness he suffered was always relieved by the care and comfort of hospital residence, and the palpitation which seemed in great degree functional, was always mitigated by attention to the state of the bowels, proper regulation of diet, and on one or two occasions when more severe and lasting than usual by the application of a Belladonna plaster. By iron and henbane, which he took for a lengthened period, both when in the hospital and out of it, he stated that he always felt himself benefited.

He left the Infirmary for the last time on the 5th of October, 1858. I had then been successful in obtaining employment for him of a light nature; at this he continued for a considerable period. I saw him frequently thereafter: there

was up to the very last occasion on which I accidentally met him in the early summer of 1859, no change in his appearance, and he always expressed himself as feeling as well as on any former occasion. For several months I had not seen him, when on Sunday the 13th of November, on visiting the Infirmary, I was startled by the announcement from the nurse —under whose charge in the hospital he had been on the occasions alluded to in this narrative,—that his body was then lying in the dead-house. On inquiry, I was grieved to learn, that during the afternoon of the preceding Friday, when in a state of intoxication, to habits of which he had lately become abandoned—he had fallen down a stair, and had been brought to the surgical hospital, where, upon examination an extensive fracture at the base of the skull was detected. He died the same evening in a state of complete insensibility. It was in the performance of a *post-mortem* examination to determine the precise nature of the injury of the head, that the opportunity occurred for observing the state of the heart.

This interesting case may be almost left without any comments ; on one or two points only I am tempted to make a few remarks :

1. The physical signs seemed to me from the very first examination to indicate a lesion of the pulmonary valves, one which offered some obstruction to the flow of the blood outwards from the ventricle, and at the same time permitted the reflux of blood backwards to a limited extent. The obstruction I argued could not be very great, as there existed no evidence of hypertrophy of the right ventricle, nor any signs of imperfect supply of blood to the lungs. The loudness of the systolic murmur seemed to bear out the doctrine of Dr. Hope, that pulmonary murmurs, from the greater nearness of the pulmonary artery to the surface of the chest, are likely to be louder than aortic murmurs. Equally strong indications of the pulmonary origin of the murmurs, as the precise situation in which they were most clearly heard, were the want of propagation in the aortic, and large vessels, or along the sternum, and the absence of any peculiarity in the superficial pulses. The incompetency of the pulmonary valves I considered to be only to a limited extent, from the faint character of the diastolic murmur and the absence of any marked pulmonary symptoms.

2. The history of the patient's case, the fact very specially, that throughout life, his breathing had been slightly affected ;

that he had never suffered from rheumatism, and his appearance, with the shortened right arm, made it not improbable that the cardiac lesion, whatever it might be, was of foetal origin.

3. Lastly, the absence of any other form of valvular disease, in this case, may reasonably be considered as having materially simplified the diagnosis, though its interest cannot be considered as on that account, in any degree diminished.

Passing over the next paper, which relates to cases in which the ophthalmoscope was used, we come to one by Dr. Sansom, containing the particulars of several cases of gonorrhœal ophthalmia, treated with stimulants and tonics. The good effects of this method of combating the disease are very well marked. We quote the first case in full, in order that our readers may become acquainted with the details of Dr. Sansom's treatment:

Gonorrhœal Ophthalmia under Stimulant and Supporting Treatment.

Elizabeth Bannister, æt. 18. Admitted under the care of Mr. Hancock, November 18th, 1857. Right eye affected. Enormous swelling and bluish-red discolouration of the lids. Abundant secretion of thick yellow pus. Cornea opaque. Intense chemosis encroaching on about one-third of the extent of the cornea. Vision absent. Suffers acute shooting and aching pain. General health good.

Origin of disease.—She is a servant in a family where three children are suffering from an affection of the genitals. A towel which was used by a brother having the venereal disease, and subsequently for the children, seems to have been the cause of communication of the virus to the latter. She has lately wiped her eyes with a sponge used by the children.

Duration of disease until application.—Five days.

Treatment.—R Quinæ disulph. gr. ii, Opii gr. i ter die. Meat diet daily, and a pint of porter. Eye to be frequently cleansed with decoction of poppy heads, and a drop of solution of nitrate of silver (gr. vi ad ʒ i) to be introduced every morning.

Progress.—Five days after admission, left eye also became affected. Nitrate of silver sol. (gr. x ad ʒ i) was introduced. Then by Mr. Hancock's order all local stimuli were abandoned. Hydrarg. Chlor. gr. i was added to each pill. Porter exchanged for wine. 13th day of disease:—Intense pain

of right eyelid. Delirium. Ordered a mixture containing ammonia and bark, and to continue the wine. 19th day:—Delirium ceased. Discharge from eye less. Chemosis of the left eye has disappeared. Cornea perfectly clear; vision good; still much conjunctival redness. Right eyelid less tender when touched, but much swollen. 34th day:—Left eye almost normal. Right eye-ball disorganized. The left eye soon regained completely its healthy condition.

The other cases, amounting to eleven in number, were treated on similar principles, and with a far greater measure of success than attends the depleting plan.

There are several other papers of interest in the number before us well worthy of attention, especially one by Mr. Barwell on granulation, but as we have already extended this notice beyond the limits assigned us, we must defer their consideration. The number is illustrated with several wood cuts and with three pages of good lithographs.

III. *Manual of Auscultation and Percussion.* Translated from the French of M.M. Barth and Roger. By J. H. POTTERER, M. D. St. Louis.

We find this little book to be the résumé and other portions of the last edition of Barth and Roger's practical treatise on Auscultation, a work well known to the profession as one of great value. The editions of Newbigging and Gurney Smith being exhausted, Dr. Pottenger's will supply the demand which we learn has often been made for this excellent manual. As an aid to the study of auscultation at the bedside, the only place where it can be properly and satisfactorily acquired, we know of no work to compare with this. We predict for it a ready sale, particularly among medical students, for whom it is peculiarly well adapted, from its clear definition of the various auscultatory phenomena, their differential diagnosis, and pathological signification. It serves as a good introduction to the more voluminous works on the same subject.

When we remember, that vital statistics have shown that in this latitude, one-sixth of the whole number of deaths are from tuberculosis, and reflect upon the large proportion of acute diseases of the heart and lungs, aneurisms, &c., it is scarcely an exaggeration to say, that in three-fourths of the cases we encounter, auscultation is of direct value. In nearly all it is indirectly or negatively important—we therefore ought to feel grateful to Dr. Pottenger for giving, in so concise a form, a work which will afford such facilities for its study. If it was correct for Corvisart to say, when the science of auscultation was in its very infancy, "*Nolle esse medicus sine auscultatione et percussione,*" how pre-eminently is such an expression at the present day appropriate.

Dr. Pottenger, previous to his removal to St. Louis, had acquired in Baltimore a reputation as a skillful auscultator, and being a well versed French scholar, he was peculiarly qualified for the task he has undertaken. He has given us a free, but faithful translation, which is very creditable to him, and we notice he has added Walshe's tables, which increase the intrinsic value of the work. The book itself is neatly printed in clear type, and is of convenient size to be carried in the pocket as a manual.

F. D.

IV. *On the Diseases, Injuries and Malformations of the Rectum and Anus; with Remarks on Habitual Constipation.*
By T. J. ASHTON, Surgeon to the Blenheim Dispensary,
&c. From the third and enlarged English edition. Philadelphia: Blanchard & Lea. 1860—pp. 292.

Among several excellent monographs on the rectum and anus, which the English language possesses, that of Mr. Ashton, in our opinion, occupies the first place. Whether as a work for the student or a practical guide for the surgeon, it is entitled to this pre-eminence, for it is both perspicuous and full, terse and at the same time containing all those necessary details which are not to be found in the ordinary

text-books, and the absence of which renders these latter so extremely unsatisfactory to all but under-graduates.

In the work before us the whole subject, to which it relates, is treated in a manner which has already rendered the treatise a standard authority in Great Britain and this country. No disease or malformation of the least importance, to which the rectum and anus are liable, has escaped the attention of the author. His remarks on hemorrhoids and fistula, are especially worthy of attention. The chapter on habitual constipation, though short, contains a great deal which, were it more generally known, would be the means of relieving much pain and distress. We regret that we have no room, at present, to furnish our readers with some extracts from the work, but we will take an early opportunity of calling their attention to some of the subjects, to the study of which Mr. Ashton has devoted his time, with so much advantage to the profession and the public.

V. *Memoranda Medica; Or, Note Book of Medical Principles, &c. &c.* By HENRY HARTSHORNE, M. D., Professor of Theory and Practice of Medicine in the Medical Department of Pennsylvania College, &c. Philadelphia: 1860. J. B. Lippincott & Co. 12mo.—pp. 190.

This little book is the production of a well-trained and logical mind. It is exactly what its title indicates, and cannot, we think, fail to be useful to the student, by pointing out to him those subjects requiring investigation at his hands. There is an independence and originality about it which we like, although we must confess that we are not altogether prepared to agree with the author on many of those points in which his individuality is most strongly marked. We recommend it not only to students—for whom it is chiefly intended—but also to practitioners, satisfied that it will afford them subjects for attentive consideration.

SELECTIONS.

[The following researches, aside from their great scientific value, may prove suggestive in investigating the diseases, for some years prevalent among cattle and hogs in the eastern and western parts of the country.—EDITORS.]

FATAL DISEASE PRODUCED BY THE TRICHINA SPIRALIS—ARTIFICIAL PROPAGATION OF THE PARASITE.

Trichina spiralis, known formerly only in a capsulated state was considered more as a zoological curiosity than as a subject of pathological interest. No symptoms were known to betray its presence : and it was, perhaps, more frequently discovered in the dissecting-room of the students than at the *post-mortems* conducted by the pathologist. Since its discovery by Owen, numerous conjectures have been formed relative to the nature, origin, and propagation of this singular parasite. Herbst believed it to be identical with filaria, Meissner and Davaine regarded it as a larva of trichosoma, and Kuchenmeister considered it to represent an undeveloped, juvenile stage of tricocephalus dispar. The latter idea seemed to be confirmed by some experiments of Leuckart, who found trichinæ in the muscles of an animal fed with tricocephali ; these experiments could, however, not be considered as conclusive, as the examination of the muscles before the experiment was commenced had been neglected. Herbst was the first to institute feeding experiments with trichinatous muscles. He found trichinæ in the muscles of the animals experimented upon ; but the connective links between the parasites introduced into the stomach and those found in the muscles being deficient, no perfect light was thrown on the subject by these observations. The first experiments of Virchow, instituted last summer, tended materially to supply these deficiencies. In the intestinal canal of an animal fed with trichinatous muscle, he found the villi crowded with psorospermia ; and free in the intestinal mucus numerous thread-like worms of the form of trichinæ, of both sexes, the sexual utricle of the male filled with sperm-cells, that of the female densely stocked with ovules. Trichinæ were thus proved to be bi-

sexual. Their non-identity with tricocephali was also placed beyond doubt. The numerous points still requiring elucidation were being reserved for further inquiry, when, in January of the present year, the following case was observed by Professor Zenker, of Dresden, which, in conjunction with the experiments to which it gave the impetus, and for which it supplied the material, not only served to bring about a final settlement of the zoological part of the question, but disclosed the startling and alarming pathological fact, that *trichinæ spiralis*, hitherto considered to be an innocent parasite, is in reality the most terrible and dangerous of its kind—that it can actually kill a healthy adult in a few weeks, under the most distressing symptoms :—

On January 12, 1860, a robust maid-servant, 24 years of age, was admitted into the Dresden Hospital. She had been indisposed since Christmas, and confined to bed since New Year's-day ; complaining of depression, lassitude, sleeplessness, loss of appetite, heat and thirst. These symptoms persisted on her admission ; there was considerable pyrexia ; the abdomen painful and tympanitic ; and although neither splenic tumour nor roseola were present, the case was put down as one of typhoid fever. A remarkable affection of the whole muscular system now rapidly supervened, consisting in extreme painfulness of the extremities, with contractions of knee and elbow-joints, and œdematosus swelling, particularly of the legs. The pain was so severe that the patient was continually moaning. Pneumonic symptoms supervened, and death took place on the 27th inst., preceded for twenty-four hours by an apathetic condition. The *post-mortem* examination showed in the internal organs merely an atelectatic condition of the left lung, with numerous small lobular infiltrations, bronchitis and hyperæmia of the mucous lining of the ileum. The muscles, however, which showed a greyish-red color and a slightly freckled appearance, were found, on microscopic examination, to harbour vast numbers of non-capsulated *trichinæ*. The parasites were living, some coiled in spirals, others with extended bodies ; and all (as Professor Virchow was the first to show, in a fragment of muscle which was forwarded to him for examination) living within the sarcolemma of the primitive fibrils. They showed various stages of development ; they were diffused over all the striated muscles of the body, with exception of the heart, and in such vast numbers, that, under a small magnifying power, as many as twenty were in the field of vision simultaneously.

The muscular substance was otherwise fragile, homogeneous, non-striated, and showed numerous transverse fissures. The intestinal mucus was found to be swarming with mature trichinæ of both sexes; and the remarkable fact was elicited, that female trichinæ are viviparous; the central portion of the bodies being observed to be full of well-developed embryos.

Inquiry being directed to the probable source of the trichinatous infection, it was ascertained that on December 21, four days before the patient was taken ill, two pigs and an ox had been slaughtered in the establishment of her master. Some smoked ham and sausage, prepared from the meat of one of the pigs, were fortunately obtained, and on examination proved to be full of trichinæ. The parasites had a shrunken appearance; otherwise unchanged; reassumed a normal appearance on the addition of water, but showed no signs of vitality. It is particularly worthy of remark, that to the naked eye the ham appeared perfectly healthy. It is very likely that the deceased had partaken of some of the raw meat. The butcher of the establishment (butchers notoriously indulge in raw meat) had also been taken seriously ill a short time afterwards, and was confined to his bed for three weeks with severe muscular pains, his whole body being semi-paralytic, etc. This complaint was ascribed to rheumatism at the time, but Professor Zenker correctly surmises that an immigration of trichinæ, not sufficiently extensive to prove fatal, may have been the cause of the attack; and that capsulated trichinæ would very likely be discoverable in his muscle. Prof. Virchow immediately commenced a series of feeding experiments with the pieces of human muscle forwarded to him by Prof. Zenker.

The following is a brief statement of the results, as published in the last number of *Virchow's Archiv.*:

Rabbits fed with trichinæ die in about a month under symptoms of general muscular paralysis.

The trichinæ, which, as long as they reside in muscle, have no perfect sexual organs, become perfectly developed in the ileum. They are found free in the duodenum about six hours after a piece of trichinatous muscle has been introduced into the stomach. In about a month they attain a length of four lines, and during that period not only mature eggs and sperm-cells, but numerous embryos, resembling small filariæ, are developed, which leave the maternal body through the anterior sexual orifice, are found in the mesenteric glands, and rapidly invade the whole muscular system, dwelling

within the sarcolemma, and feeding upon the contractile substance of the muscular fibres. They are found in all the striated muscles of the body, with the exception of the heart (Zenker states that he found a few in the heart of a rabbit fed with trichinæ); liver, lungs kidneys, etc., are free. In case the immigration is not sufficiently extensive to cause a fatal result, the trichinæ become enclosed in a capsule which consists originally merely in a thickening of the sarcolemma, and this is the only condition in which they were formerly known. The trichina now shows the highest development it is able to attain within the muscle, into which it originally penetrated in an embryonic stage. It still retains its vitality, and quietly waits for an opportunity to find its way back into the intestinal canal, where, as Virchow's observations have shown, the two sexes attain the stage of puberty, and a wonderful productiveness, so pernicious to the individual who is unfortunate enough to harbor such terrible guests, is displayed. The same applies to the non-capsulated trichinæ. The flesh of the rabbit had to the naked eye a perfectly normal appearance. The trichinæ are not near as numerous in this case as they were on former occasions. The intestinal mucus contained mature trichinæ of both sexes.

Professor Zenker made a feeding experiment with a piece of the ham. No trichinæ were to be found in the rabbit a week after. These experiments will no doubt be repeated, as the time elapsed was far too short to enable a definite conclusion to be formed.—*Medical Times and Gazette, May, 1860.*

Dr. William Turner, M. B., Senior Demonstrator of Anatomy in the University of Edinburg, in the September number of the Medical Journal of that city, relates the above case of Prof. Zenker, and after adding the details of some experiments of his own upon cats, thus continues:

The conclusions which may be drawn from the experiment I have now related appear to me to be the following: The interval which had elapsed between the feeding and the death of the cat had given time for the trichinæ which it had swallowed to propagate in its intestine. Many of the young trichinæ still remained in the gut, and constituted the thread-like worms which I have described as existing there. Others had emigrated from the gut, and, after working their way into the muscles, had become encysted. The cysts themselves exhibited all the characters of having been recently formed;

for they were almost perfectly transparent, and they exhibited no disposition of calcareous particles either in their walls or cavities ; besides, there was an absence of fatty degeneration in the muscular fibres surrounding them, and of the deposition of fat-cells in their vicinity. Lest it might be supposed that the thread-like worms found in the intestine of this cat were derived from the ascarides dwelling there, I examined the intestinal mucus of a healthy cat, to which no trichina flesh had been given, but in whose canal living ascarides were present, but no trace of such worms were seen. Moreover, it must be borne in mind, that whilst the ascaris mystax appears exclusively to inhabit the duodenum and jejunum, the thread-like worms were found both in the large and small intestine.

But, whilst the conclusions which I have drawn tend to explain, more satisfactorily than any other, the sequence of events, yet it must be confessed that certain links are still wanting to render the chain of evidence complete. In such an extensive emigration as must here have taken place, one would have expected to have found indications of the passage of the worm through the intestinal wall ; but, although I have examined microscopically several dozens of sections made through different parts of the wall, I could see no trace of such passage, neither could I find any worms lying free in the peritoneal cavity. It should be mentioned, however, that Virchow has met with them in the mesenteric glands, and Herbst also has seen them in the mesentery of a small owl. One would also have imagined that those muscles which surround the abdominal cavity—viz : the diaphragm, transversales, and psoas—would have contained the worms in greater abundance than the muscles situated nearer the surface of the body, which was not, however, the case. It was long ago remarked by Owen, that the superficial muscles of the human body were much more abundantly affected than those more deeply situated. In special examinations which I have made of several bodies, I have invariably found this to be the case, the pectoralis major, trapezius, latissimus, and external oblique containing more cysts in a given space than the pectoralis minor, rhomboideus, and internal oblique or transversalis. Moreover, the cysts are much more extensively distributed near the superficial than the deep surface of the same muscle,—a fact of considerable interest, for it shows the tendency which the worms possess to work their way towards the exterior.

When the worms have once reached the muscles and become encysted, they remain dormant, many of them undergoing calcareous degeneration. If it should so happen that the flesh containing them should be swallowed by another animal, then they become developed in its intestine. In Zenker's case, and in the pig fed by Leuckart, the emigration of the worms from the intestine to the muscles, and their presence in the latter, produced well-marked symptoms, which in Zenker's case led to a fatal termination. Up to the present time this is the only recorded instance of death being occasioned by the worm, or even of symptoms being produced which might lead to the supposition that it was present.

No record is given of symptoms which would be referred to the emigration of the worm from the intestine to the muscles, and, if ever these occurred, they were probably so far back in the life of the patient as to have escaped recollection. That it is quite possible for the active exercise of the muscles to be performed, and for the individual to be apparently in sound bodily health, even with the encysted worm present in the muscles, is proved by the two cases recorded by Mr. Curling.

With regard to the comparative frequency of the trichina in man, I am disposed to look upon it as much more common than is generally supposed, between one and two per cent. of the dead bodies which have come under my observation during the last five years having been so affected.

REMARKS.—In connection with the foregoing, we quote the following extract from the *Proceedings of the Academy of Natural Sciences of Philadelphia*, for January 1856, both on account of its importance, and because Profs. Virchow and Zenker, and Dr. William Turner seem to be ignorant of the facts which it establishes.

Dr. Leidy exhibited the heart of a dog in which the right ventricle, and the pulmonary artery and its branches, were literally stuffed with worms—minute worms have long been known circulating with the blood, and termed Hæmatozoa. About five years since, Dr. L. described in vol. 5, of the *Proceedings*, the worm exhibited this evening, as *Filaria Canis Cordis*. The males measure five inches in length, the females ten inches.

Two hearts were brought to Dr. L. by Mr. Joseph Jones, of Georgia, [now Prof. Jones, of Augusta,] one, that of a pointer, had in it five worms; the other, that of a cur, was the one exhibited. It is probable that both venæ cavæ were also filled, as the portions of those vessels that remained, were blocked up. The animals did not die from the presence of the entozoa, but were killed in the course of some experiments. The cur was emaciated and voracious, restless when awake and disturbed in its sleep.

Reference may also be made to a paper by Prof. Leidy, in the February number of the *Proceedings* for 1856, entitled "*A Synopsis of Entozoa and some of their Ecto-Congeners observed by the Author,*" which contains a great deal of interesting information on the subject.

We may likewise mention that Valentin, (*Muller's Archiv* 1841, p. 435,) has described a parasite which he detected in the blood of the living salmon-trout (*salmo fario*). This organism consisted of a single cell with radiating processes. Gluge, (*Muller's Archiv* 1848, p. 148,) mentions having seen a similar parasite in the blood of a frog, and suggests a possible connection between these animals and intestinal worms.

We have on several occasions found, not only entozoa, but their eggs also, in the blood of fish, and reptiles, and have microscopical preparations and drawings of them. In the spleen of the terrapin, (*Emys terrapin*) we have rarely failed to find the ova of parasites, and the entozoa themselves, can also frequently be detected in this organ.

We commend the whole subject to the attention of those of our readers who take an interest in the Natural Sciences, assured that they will find in it, an ample field for further investigation. Professor Leidy has hitherto been the only naturalist in the country who has paid any considerable attention to the discovery of new species, and their scientific classification. His papers on these subjects are mostly to be found in the *Proceedings of the Academy of Natural Sciences of Philadelphia.*

CHRONICLE OF MEDICAL SCIENCE.

I.—PHYSIOLOGY AND CHEMISTRY.

1. *Existence of Nitrogen in Plants—Its Origin in Animals.*
By CHARLES T. JACKSON, M. D. (From the Boston Medical and Surgical Journal.)

Many years ago, while a student of medicine, the writer essayed to prove, by exclusion, that animals derived their nitrogen from food, and that since exclusively herbivorous animals apparently contained as much nitrogen in their tissues as carnivorous ones, he argued that the nitrogenous element of plants must have been overlooked by chemists and physiologists. We were taught in those days that nature produced all the varied products of the vegetable kingdom by means of the three elements, carbon, hydrogen and oxygen, and that animal matter differed from vegetable, owing to the addition of nitrogen. Organic chemistry, then almost unknown, or certainly in its infancy, had not disclosed the fact of the existence of nitrogen in vegetable matters in nearly the same proportions as in those of animal origin. It had, indeed, been observed that cabbages, turnips, and some other plants of the cruciferous order, on putrefaction gave out the sulphide of ammonium, then called hydrosulphuret of ammonia, a fact which pointed to the existence of sulphur and some nitrogenous ingredient in plants of that order, but this was considered an exception to the rule. Notwithstanding the proofs that animals do not derive their nitrogen from the atmosphere by pulmonary or by cutaneous absorption, and that there was no other way by which this element could be introduced except by the stomach, in the form of food, and that animal life could be sustained by an exclusively vegetable diet, the books on chemistry, botany and physiology continued to ignore the existence of nitrogen in plants. At length analytic chemistry reached into the domain of organic products, and Dumas, Cahours, Liebig and others, demonstrated that vegetable matters contain nearly the same proportions of nitrogen as those of animal origin. There still

exists a doubt as to the mode of combination of the elements in these two forms of matter, and it is highly probable they will prove additional instances of isomerism. We know, for instance, how readily we can distinguish most animal matters from those of the vegetable kingdom by the simple test of combustion. A portion of animal fibrine, albumen or gelatine can thus at once be distinguished from any vegetable product, the so-called animal odor in the smoke being readily recognized. A single fibre of cotton, or of linen, may thus be distinguished from one of silk or of wool, the two last giving the odor peculiar to animal matter, on combustion, while the two former give the smell of burning wood or paper.

Animal matters, on being heated to a temperature sufficient to decompose them, break up chiefly into nitrogenous compounds, while vegetable matters of identical composition break up under the same circumstances into hydro-carbons and water. Here, then, is a curious and important department of organic chemistry for further examination. Recent experiments on the production of oils, parafine, and numerous other valuable products of decomposition of vegetable matters at regulated temperatures, have thrown much light on the phenomena of decomposition and re-composition of organic substances. The matters which we obtain by distillation did not pre-exist in the substance decomposed by heat. For instance, there is no parafine in peat, but it is produced by a re-combination of the hydro-carbonaceous elements, at a certain temperature. Bituminous coals contain no bitumen, as may be proved by digesting them in benzole, which would at once dissolve it if any existed in the coal.

If we heat the coal until it softens, we produce bitumen abundantly, and it may now be dissolved out by the aid of the benzole. Only one kind of coal—that called asphaltic coal—yields any bitumen before it is roasted. The Albert, N. B., coal yields 15 per cent. of soluble bitumen, but this is an exceptional case. Again, parafine, according to the researches of Mr. Atwood, is capable of being again broken up into volatilizable and permanent oils, and many heavy oils have been by him re-arranged in their elementary combinations, so as to give entirely new products. These are examples of changes effected in organic matters by the agency of regulated heat.

By the assimilatory powers of animal organism, more wonderful changes are effected in vegetable matter. All the complicated fluids and solids of the animal body are

brought forth from the elements of food, and the vegetable proximate principles have their elements re-arranged and adapted to the purposes of animal life. It is probable that the animal economy cannot tolerate, in the circulatory system, any purely vegetable combinations of matter, and that, if the conversion into animal combinations does not take place, the introduced matter acts as an irritant, and is expelled by the secernt organs. Sugar, as such, certainly acts as a powerful irritant on the kidneys, as is shown by dissection of a diabetic subject.

The failure of the organs in the conversion of this substance into proper circulatory food is now well known to be due to a disorder of certain of the spinal nerves, or to the medulla oblongata.

Oil, injected into the blood, acts as a poison, because it has not been carried through the regular organs for its assimilation. Both sugar and oils are good respiratory food, but they must first be introduced through the organs of digestion, and be carried in succession through the various organs instituted for their preparation. Milk, in any other organ than the stomach, will not act as food. Injected into the blood, it would prove an irritant, if not a poison, for its elements are not so combined as to fit it for the circulatory vessels.

In order to explain how closely animal and vegetable proximate principles resemble each other, as shown by ultimate or elementary analysis, I subjoin some of the results of analyses made by Dumas and Cahours, still calling attention to the fact that these bodies do differ in the mode of combination of their elements, as before stated :

	Vegetable Albumen.	Albumen of Eggs.	Albumen of Serum,
Carbon,	53.74	53.37	53.32
Hydrogen,	7.11	7.10	7.29
Nitrogen,	15.66	15.77	15.70
Oxygen,	23.50	23.76	23.69
	Fibrine of Flour:	Of Human Blood.	Of a dog fed on bread two and a half months.
Carbon,	53.23	52.78	52.57
Hydrogen,	7.01	6.96	7.07
Nitrogen,	16.41	16.78	16.55
Oxygen,	23.35	23.48	23.81
	Casein of Flour.	Of Woman's Milk.	Of Cow's Milk.
Carbon,	53.46	53.47	53.50
Hydrogen,	7.13	7.13	7.05
Nitrogen,	16.04	15.85	15.77
Oxygen,	23.37	23.57	23.68

It will be seen that these matters are nearly of the same composition, as shown by elementary analysis; but still, under the test of destructive distillation, animal and vegeta-

ble substances will break up into entirely different products, and by their known difference in digestibility it would appear that they are differently acted upon, and undoubtedly different organic products are formed from them in the organs of assimilation.

It should be noticed, also, that the small proportions of sulphur and phosphorus, or their salts, which exist in those proximate principles of animal origin, and not in those derived from vegetables, are not considered in Dumas's analyses, above quoted. In the process of nutrition, of course, these elements are of great importance. However, it will be seen that in ultimate analysis animal and vegetable matters are essentially alike ; that the pure fibrine of the oak and that of the human heart cannot be distinguished by such analysis, though by simple combustion in the flame of a candle, we may know which was from the vegetable and which from the animal.

2. *Experiments with Haschish.*

Our friend, Dr. Polli, of Milan, has favored us with a most interesting account of the effects of haschish, derived from his own observations and experiments. We extract from his history the following curious details :

The specimen of haschish used by Dr. Polli was brought from the East by Dr. Rosa. It was in a cylindrical form, and of a dark brown color ; it looked like a dry extract. It had a slight smell ; it could be dissolved in water, but much more readily in ether ; from the solution a black resinous substance separated itself, having all the characters of cannabina. A gramme of this haschish contained a quarter of a gramme of resinous matter, and burnt, it left behind half a gramme of ash, in which was evident the presence of oxydes of iron, lime, silica, and carbonic and sulphuric acids. The dose which Dr. Rosa asserts was taken at Damascus was about half a gramme ; this would represent about twenty centigrammes of active or resinoid substance ; he had only seen this substance made use of in the pipe, but Dr. Polli and his colleagues, to assure themselves of the effect of it, took it internally. These gentlemen took haschish in half-gramme doses, biting it and swallowing it down with sips of rum ; half an hour passed without effect ; they then took a second dose in the same manner, and drank a cup of coffee upon it ; a little later they took a third dose with coffee, and

smoked a fourth dose with a little Hungarian tobacco. At the end of their pipes they felt no effect, but soon one of them commenced to jest upon some Frenchified words, and to make quick movements with the spoon used to stir the coffee ; in him the first signs of inebriation showed themselves, whilst his companions remained unaffected to external view, but were feeling a little mental aberration. The effect was complete on all about one hour and a half after taking the first dose.

In addition to these facts, evidence is given from Dr. A. Teste, who took the drug ten or twelve times, and gave it to twenty persons. He affirms that haschish provokes appetite before food, and assists digestion if taken with food in small quantities. Dr. Polli confirms this. The following are the effects, described by Teste, of a very large dose : There is first a sensation of " vacuity and at the same time of fullness in the brain, without any anxiety or illness ; then a whistling in the ears, which changes to a bubbling ; the vault of the cranium seems to be raised, and there follow exacerbations of heat, which rise to the head and color the face ; there is fullness and vivacity of the eyes. Very quickly the sound in the ears ceases ; and there is set up sudden laughter. Efforts are made to speak, but what would be said is forgotten ; the words and the ideas are perplexed, and a tremendous burst of laughter breaks off the sentence begun ; in a few minutes this inordinate laughter becomes irrepressible. After a certain time a sort of soft languor takes possession of the patient, and the powers of movement are impeded, the limbs feel as if separated from the body ; all seems to be embellished around ; a splendid light appears to inundate, yet with blinding sensation ; the most ordinary faces appear seraphic ; ideas flow one into the other, and the subject abandons himself with so much rapidity that an age seems to have been lived in a minute. Those faculties of the mind, which in the normal state are most exercised, are those also which are most exercised during the inebriation. There are excited no amorous propensities. Very rarely, however, the haschish may bring on melancholy symptoms or delirium. After some hours the exaltation declines and sleep succeeds ; sometimes borborygmi and nausea, or stitch occur ; a copious diarrhoea relieves the symptoms. The desire of going to bed becomes irresistible, and sound sleep ends this inebriation, which resembles nothing else in results and effects. It appeared from the further observations by Dr. Polli that while

the subject is under the influence of haschish, he does not feel pain from blows, and the mind becomes quite docile, yielding readily to the orders of a companion. One gentleman who very accurately records his sensations observed that the general anaesthesia into which he was thrown passed from the left half of the body first. Consciousness was never entirely lost. The symptoms did not fairly pass off in this gentleman for thirty-six hours. Another of the experimenters who took a large quantity of water after the haschish, had copious vomiting, which lasted eleven hours.

From some further experiments, Polli determined that haschish possesses powerful antiseptic properties, and he suggested that the substance might be used as an antidote in hydrophobia.

[Since the publication of the paper from which the above is taken, we find from a note courteously sent to us by Dr. Polli that he has tried haschish in a case of hydrophobia, but without success. On the 12th day of May of the present year, a young man in the Grand Hospital at Milan, who had been twenty-four hours affected, was treated by Dr. Polli with the drug. He took three grammes of the substance in a short period. The hydrophobic delirium was soon masked by a quiet delirium; the patient at once became good, docile, and confiding; but the dysphagia continued, and after the convulsions a general paralysis succeeded. He died on the third day. At the *post mortem*, the blood was found black and fluid in all the vessels, and evolved ammonia. It did not coagulate spontaneously, but did so on addition of a feeble solution of sulphuric acid. The blood that was left alkaline remained free from putrefaction for two months.—B. W. R.]

3. *Peroxide of Hydrogen.*

At a recent session of the Medical Society of London, Dr. Richardson brought before the Fellows the subject of the physiological and remedial properties of the *Peroxide of Hydrogen*. This remarkable substance was discovered in 1818 by Thénard, and although it has always attracted great attention in the chemical world, has been introduced into nearly every discussion on "ozone," and was many years ago put forward by the Society of Sciences of Haarlem, as the subject of a medical prize, it has been left to our countryman to lead the way to the study of the subject in its physiological and therapeutical aspects. Dr. Richard-

son has been employed in this research for twelve months, and his observations in relation to the nature of the body in question, its formation for therapeutical uses, and its effects on animals, are singularly interesting. For instance, he showed by experiment that the oxidizing power of the solution of peroxide is suspended by the practice of all narcotics; thus establishing the great law advanced by Snow, that narcotism is suspended oxidation, and that every substance, which on being introduced into animals produces narcotization, has the property, either by a negative influence, or by catalysis, of preventing the union of oxygen with other substances with which it is in contact, and for which it has an affinity. Again, it was shown that some animal structures, to say nothing of certain inorganic bodies, on being brought into contact with the peroxide in solution, liberate the oxygen. Fibrine has this property, and carbonic acid. A fish placed in the solution evolved the oxygen with considerable action. Physiologically, the peroxide, on addition to venous blood, gives to the blood the arterial character; it stimulates the left side of the heart to contraction, but seems to stop the action of the right side. Injected into the arteries, it restores, for a time, a condition of muscle during which contraction occurs on the application of an excitant. It also suspends cadaveric rigidity, and further, it prevents the spasms of muscle caused by such bodies as ammonia and hydrocyanic acid. Therapeutically, peroxide of hydrogen offers itself in all cases marked by deficient oxidation. In low fevers; as an antidote to various poisons; in tetanus; in diabetes, and in cancer. It is given compatibly with all the mineral acids; and the doses of a solution charged with ten volumes of the peroxide is from one increasing to four fluid drachms, in distilled water; externally, it forms a deodorising lotion. Dr. Richardson took pains in his paper to explain the exact mode of making the solution; but we feel that the process as yet is too complicated for general introduction into the Dispensary. To bring the substance into general use, some practical Pharmaceutical Chemist must take it in hand. We are informed, indeed, that Bullock and Reynolds are already preparing the peroxide solution, and as several practitioners are only waiting for the proposed remedy to test its effects, we may expect soon to see its virtues fully brought out in the treatment of disease. It is just to say that the introducer of the remedy specially guarded himself from offering any extreme views: he claimed simply that a substance possessing

such singular properties, physiologically, should be used rationally as a medicine in extreme cases for which we now have virtually, no means at command. This is a fair mode of putting the matter, and if the peroxide prove essential in the cure of but one disease, the physiologists may at last rebut the charge that their science does nothing for treatment, and that in the midst of their learning they are obliged to leave remedies to the empiric and the wheel of fortune. We shall watch the result with anxiety.—*Medical Times and Gazette.*

4. A New Test for Diabetes. By E. C. BIDWELL, M. D.

The only test for glucosuria which I have hitherto found satisfactory—fermentation—involves a delay which is often exceedingly annoying, and sometimes fatal to a satisfactory and seasonable diagnosis. Those founded upon the reduction of metallic oxides, besides being complicated and inconvenient for clinical use, are liable to various fallacies. A better test than any I have seen described, seemed to me a *desideratum*—one which should be delicate and conclusive, and at the same time ready and convenient. Moved by this sense of a want to experiment for a new process, I have discovered one which seems to me to meet fully the needs of the case; one, which, if it be not pre-eminently scientific, is nevertheless facile and reliable. For the benefit of any others who may have felt the same want, I herewith communicate the result of my investigations.

Technically described, it is simply the conversion of the saccharine element of diabetic urine into *caramel* by heat. My mode is this. Upon a clean slip of tinned iron, place one or two drops of the suspected material, and hold it over a spirit lamp: the fluid will speedily evaporate, leaving, if the process be arrested at that point, scarcely a trace upon the metallic surface. Continue the application of heat; in a few moments after the desiccation is complete, a spot of an inch or so in diameter, over which the drop had spread with the first ebullition, will gradually assume a rich reddish-brown color, with a brilliant lustre, as if coated with a film of varnish or Japan lacquer. A stronger heat produces a darker color, but the lustre continues till the heat becomes sufficiently intense to decompose the substance. This experiment has succeeded perfectly in my hands, when the urine on trial, previously known to contain glucose, was of specific gravity

ess than 1030, and still further reduced by the addition of three or four times as much of water. It is thus proved to be a delicate test. I suppose it to be conclusive, also, for I have never yet found any other constituent of urine, normal or abnormal, capable of producing anything at all like the same appearance under the same treatment. The nearest approach is this: some samples of urine, not diabetic, when treated in this way, leave a faint, dull, yellowish stain, easily distinguished from caramel by its paler color, and the entire absence of lustre. I need scarcely add, that a solution of sugar, not diabetic, exhibits almost exactly the same reaction.

With the augmented interest attached to glucosuria; since, besides being a leading feature of a most intractable, but fortunately rare disease, it is found symptomatically associated with several other diseases and injuries, an increased facility for its detection is almost a necessity of the profession. I trust they will find it in the simple and beautiful experiment above described.—*Boston Medical and Surgical Journal.*

II.—MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Asarum Europaeum a Remedy for the Effects of Drinking.* By DR. SMIRNOFF.

Dr. Smirnoff states that he has become convinced, from repeated trials, that the *asarum Europaeum* well deserves the reputation it has obtained in Russia of being an excellent remedy for the effects of drinking.

The influence of a continuous abuse of alcoholic drinks is first exerted locally, but afterwards dyspepsia is produced ; and the nutrition and functions of the entire economy, especially of the central portions of the nervous system, becoming interfered with, the blood itself being loaded with an injurious foreign material, the *dyscrasia potatorum* is at last completely established.

The assarum fulfills various indications, acting beneficially on the alimentary canal in those cases in which the digestive powers are so much at fault. Its aromatic principle confers upon it a stomachic power, and regulates the condition of the

intestinal discharges, producing vomiting and purging when given in large doses. Its most beneficial action, however, is manifested on the defective appetite, and by its counteracting the invincible longing for alcohol. The horrible sensations with which the drinker awakes in the morning and which compel him to seek temporary and delusive relief from renewed libations, are much blunted and mitigated by means of a glass of strong infusion of asarum and some other nervine —e.g. valerian. Its immediate effect is often to produce vomiting and sometimes purging; but the painful sensations at the epigastrium undergo relief, and the appetite becomes invigorated. Persons who have been long habituated to alcoholic drinks cannot, however, have these suddenly suppressed with impunity; and in such cases the author gives the asarum in brandy, applying at the same time a blister or an issue to the pit of the stomach. By this means the normal activity of the stomach becomes excited and the longing for alcohol diminished.

The author, however, cannot agree with those who would still allow a small quantity of spirits to habitual drinkers, even when the morbid desire for it has become appeased. The continuous use of a decoction of asarum, even when it does not succeed in extinguishing the desire for alcohol, always supports the powers of the patient; and it is remarkable in some cases, in which the individuals have been long accustomed to periodical intervals of drunkenness, ending in delirium tremens, how much longer those intervals will become, and how much less likely delirium tremens is to recur. The patients themselves are sometimes surprised at the comparative impunity with which they can continue their drinking. The author prescribes three or four glasses a day of an infusion made with $\frac{3}{4}$ ij of asarum root, $\frac{3}{4}$ i of valerian root, and $\frac{3}{4}$ ss of orange-peel, but he does not state the quantity of water employed. In cases of drunkenness, another formula is composed of decoction of asarum, (made by boiling from $\frac{3}{4}$ ss to $\frac{3}{4}$ j of the root,) $\frac{3}{4}$ vj, tincture of valerian, 3 ij to 3 iiij, Sydenham's laudanum, gtt. xij, syrup of orange-peel, $\frac{3}{4}$ ss. A tablespoonful of this is taken every two hours. He finds from two to five grains of bismuth, taken four times a day, a valuable adjunct. He has also found the following popular Russian remedy of service in cases of drunkenness: R. Ammon. carb., $\frac{3}{4}$ ss; aceti vini, 1bj; oxymel scill., $\frac{3}{4}$ ss. Two tablespoonfuls every two hours.—*Med. Zeit. Russlands, and Med. Times*, July, 1860.

2. *The Local Treatment of Diphtheria.*

The *Union Medicale* has recently published two letters from M. M. Loiseau and Troussseau on the use of tannin and alum locally in the treatment of pharyngo-laryngeal diphtheria.

M. Loiseau, considering the false membranes, in all cases, to be but consequences of diphtheria, and, with the exception of croup, rather useful than injurious, provided their putrefaction be prevented, again lays stress upon the beneficial action of styptics, and especially tannin ; these seem to convert the morbid secretions into an imputrescible epidermis, which affords protection to the denuded surfaces and promotes their cicatrization. M. Loiseau performs insufflation of alum five or six times a day, and of pure tannin, equally often ; he states that a cure may thus be effected in three or four days, on the same principle, which M. Troussseau adopted in his practice in 1828. A quotation from an article published on the subject in 1833, by M. Troussseau in the *Dictionnaire Medical*, has elicited from the learned Professor a reply which we reproduce, as it explains the changes his views have undergone on the efficacy of the medical treatment of diphtheria, and more especially of croup.

"It is perfectly true," says M. Troussseau, at the date of September 20th, "that in the epidemics of diphtheria, which from 1818 to 1828 prevailed in the departments of Indre-et-Loire, Loir-et-Cher, and Loiret, the disease of the fauces readily yielded to frequent insufflation of alum, and to cauterization with muriatic acid or nitrate of silver. It is equally true that, when the complaint was met in its early stages, four or five days were sufficient to effect a cure, excepting, of course, when diphtheria had invaded the larynx."

"For ten years past, however, diphtheria has acquired in Paris and in the provinces a degree of gravity and of malignancy which it did not, by any means, possess thirty years ago ; and I declare that it is now a long time since I have had the good fortune to see genuine pharyngeal diphtheria yield to treatment in four or five days. Common pseudo-membranous angina, or herpes of the fauces may be cured in twenty-four or forty-eight hours, but not real diphtheria such as we too frequently meet with."

"I resort to the same means as M. Loiseau and perform insufflation into the throat every two hours, and even every hour, if necessary, alternating the use of equal parts of sugar and alum or tannin. From time to time, I brush rather

roughly the uvula and tonsils, before resorting to insufflation, in order that the medicinal agents may come into immediate contact with the mucous surface, and I consider myself very fortunate when, after ten days' treatment, all trace of false membranes has disappeared.

"In five adults whom, within the last few months, I attended with my friends Drs. Bernard, Patouillet and Blondeau, the disease lasted nine days in one case, and more than a fortnight in the others, and I repeat that it would have been utterly impossible to use with more persevering energy the remedies extolled by M. Loiseau, which I consider most useful, namely: alum and tannin.

"Appealing to the testimony of my learned colleagues of the Hospital for Infancy, M.M. Blache, Bouvier, Roger, Sée, and of Dr. Barthez, I find their statements are perfectly similar to mine, and that they agree with me in thinking that the singularly rapid, extraordinary and numerous cures effected by M. Loiseau may perhaps be accounted for by his not having allowed himself sufficient time to establish an incontrovertible diagnosis.

"It is difficult at first, and especially in children, to distinguish genuine diphtheria from pharyngeal herpes; and although in doubt I prescribe the local application of alum and tannin, I do not flatter myself that I have effected a cure of tonsillary diphtheria when, after twenty-four hours, I cease to detect in the throat any pellicular concretions."

We are happy to be confirmed by so competent an authority, in the remarks we have offered above on the importance of diagnosis in the appreciation of the various remedies recommended for a disease the gravity of which, far from subsiding, seems rather on the increase, especially when observed in an epidemic form.

3. *On Glycosuria as an accompaniment of Marsh Fevers.* By DR. BURDEL, Physician to the Vierzon Hospital.

Dr. Burdel regards marsh poison as a myth, and looks upon marsh fever as a result of a perturbation of the cerebro-spinal centre and the sympathetic system, adopting very nearly the same phrase as the one by which Bernard defines glycosuria. The author of the present paper, in his researches into the nature of marsh fever, has confirmed the above view of its character by ascertaining in the majority of cases the presence of sugar in the urine.

Dr. Burdel employed the test with liquor potassæ, Fehling's liquids, the test with bismuth and potash or carbonate of soda, and the yeast test. It was especially in the first commencement of the attack that the quantity of sugar was considerable; it diminished gradually towards the termination of the paroxysm, and generally disappeared entirely during the interval. The closer the attacks approach one another, the larger the amount of sugar.

In eighty cases of well-marked intermittent fever the author uniformly found sugar; in thirty other cases, in which the fever was at first intermittent and subsequently became remittent, the sugar was present, but only in small quantity and for a brief space. In two cases of intermittent fever following typhoid fever, a considerable quantity of sugar was shown to be present.

In the cases presenting the largest quantity of sugar, as much as 10 per 1000 was found.—*L'Union Medicale*, No. 139, 1859.

4. *Gouty Concretions in the Ear.*

Concretions, occupying the lobe of the ear, within the helix, in the shape of small round prominences, under the skin, have often been observed in gouty persons—*i. e.* in subjects presenting manifestations of the lithic diathesis. Left to themselves, these concretions are sometimes spontaneously eliminated without the interposition of any inflammatory action, and leave a slight scar behind.

This is not a new disease. English practitioners, who have more frequent opportunities than ourselves of studying gout, have already observed them. Garrod asserts that they are to be met with in half the cases, and even that their appearance sometimes precedes the other manifestations of the morbid diathesis. This would therefore be a very valuable element in the diagnosis of incipient gouty affections. Mr. Charcot has observed but six individuals affected with gout, in consequence of the rarity of this disease in hospitals; of these six patients, three presented the concretions we have just noticed. Extracted by means of a small incision, they displayed the aspect of a plaster-like matter, constituted by hard crystals. If they are analyzed, their chemical composition is found to be that of articular tophus; the addition of acetic acid causes the deposition of uric acid, in very apparent crystals.

5. Hot Air and Carbonic Acid Baths.

A recent article in the *Journal of Practical Medicine and Surgery* (Art. 5883), in which the therapeutic properties of carbonic acid gas are referred to, suggests an explanation which had not before occurred to me of an empirical method of treatment I have long been in the habit of applying in rheumatism. It is a very simple kind of hot air bath which I have often found highly beneficial and is administered as follows :

The patient undresses entirely and lies down on a couch ; he is then covered with a sheet or blanket supported by hoops at a distance of about eighteen inches from the body. An earthenware vessel, containing a lighted candle 5 inches in length, is then placed between the legs, the edge of the sheet being raised in one point to admit a quantity of air sufficient to supply materials for combustion. Copious perspiration generally ensues in less than half an hour, and when the taper ceases to burn, the patient is removed to another bed, where diaphoresis continues and sound sleep follows. Rheumatic pains are frequently cured by two such baths.

Now the carbonic acid evolved during the combustion of the taper appears to me to claim a most important share in the results of the medication, hot air and steam alone being incapable of producing such powerful effects.—*Championnere.*

6. Salts in the Treatment of Dysentery.

Messrs. Editors: Any one disposed to test the value of "salts" in the treatment of dysentery, as recommended by Dr. Jackson in your last issue, may find in the dispensaries a formula for preparing the article, which has long been a popular one and has the advantage of being required in a small amount at once. The formula is : Glauber's salts, $\frac{3}{2}$ i.; water, $\frac{3}{2}$ iiij.; nitric acid, muriatic acid, each $\frac{3}{2}$ i.; alum, $\frac{3}{2}$ ss. Dose, a large tablespoonful.

I have used it for some years, both in dysentery and chronic diarrhoea, and its use has been followed by recovery sooner than I have found it to be after any other prescription.

When the wholesale throwing overboard of drugs shall take place, our humane feelings will be comforted by the reflection that this medicine, at least, will not be "worse for the fishes," as sea-water already contains most of its ingredients.—*Boston Journal.* B.

7. *Alum Lozenges for Aphthæ and Pharyngo-Laryngeal Angina.*

Instead of the alum gargles prescribed for pharyngo-laryngeal angina, the aphony or dysphony of professional singers, and for aphthæ of the mouth, whatever be their origin, M. Argenti exhibits with benefit the following lozenges:

R Aluminis, Tragacanthæ, Sacchari, Aq. destill. laurocerasi, à q. s.—for lozenges weighing 7 gr. and containing each about $\frac{1}{2}$ a grain of alum.

The well mixed mass is spread over a sheet of paper, distributed into lozenges, and dried at a mild heat. The result is a pastille in which the astringent taste of the alum is tempered by the sweetening ingredients, and will keep for months. The lozenge is allowed to melt in the mouth, and the saliva conveys the medicinal agent to the diseased parts.—*Championniere.*

III.—SURGICAL PATHOLOGY AND OPERATIONS.

1. *On Iridectomy in Glaucoma.* By J. W. HULKE, F. R. C. S., (Medical Times and Gazette, July 21 and September 1, 1860,) and by W. BOWMAN, F. R. S., (Medical Times and Gazette, August 25, 1860.)

The operation of iridectomy, consisting in the removal of a portion of the iris, was devised by Dr. A. von Graefe, of Berlin, to relieve permanently the intra-ocular pressure which always exists in the different stages of glaucomatous disease. This pressure, leading to great tension of the globe of the eye, gives rise to intense pain and a dilated and fixed condition of the pupils, which present a greenish hue, and is followed, sooner or latter, by paralysis and congestion of the retina, excavation of the optic nerve, and inflammation, acute or chronic, of the component tissues of the eye, leading to their degeneration, and finally to complete loss of sight. The indications, therefore, are to restore the natural equilibrium of the circulation, and to prevent the destruction and compression of the retina, by removing the intra-ocular pressure. For this purpose, iridectomy, so warmly advocated by

Graefe, Donders, Arlt, Bader, Hulke, Bowman, Critchett, and other experienced ophthalmic surgeons, is, in their opinion, the only resource, and they maintain that, until this process was adopted, all other forms of treatment proved useless in this disease. On the other hand, Hancock, Middlemore, Desmarres, and others, to accomplish the same object, drain off the excess of the fluid by means of puncturing the sclerotica ; and between the surgeons of the two different schools a warm discussion has been, and is still being carried on, in relation to the merits of the two methods.

The operation of removing a portion of the iris is usually very simple. An incision is made at the junction of the sclerotica with the cornea, close in front of the iris, and a portion of this membrane is excised from its pupillary margin to its insertion, to the extent of a fifth or sixth of its circuit. The small quantity of blood which escapes into the anterior chamber must be removed either by gentle pressure or by means of a curette, and a wet cloth should be applied to the eye. Iridectomy may be performed either above or below, but the former is preferred on account of there being less disfigurement from the resulting coloboma of the iris.

[We have no experience with this operation, but we entirely agree with its opponents that it does not possess any of the advantages claimed for it by its inventor and his followers. How the removal of a portion of the iris acts otherwise than the more simple operation of paracentesis of the sclerotica, in relieving the intra-ocular pressure, we must confess we are unable to comprehend. To use the language of the caustic reviewer of the procedure, in an article entitled "Medical Epidemics—Glaucoma and Iridectomy," in the *Dublin Quarterly Journal of Medical Science* for August, 1860, and in whose views we, in the main, agree : "But then, we are told, it is not the mere letting out of the vitreous or aqueous fluid, but the cutting out of a portion of the iris, that relieves the pressure and effects the good. We are stupid enough not to see this in the same light as our neighbors. No doubt a wound made for the removal of a portion of the iris, even if none of that membrane remains in it, will not close so accurately nor heal so quickly as a puncture made by a broad needle ; but if the pupil is free, the iris cannot by its presence or its bulk exercise any pressure on the optic nerve." In the second edition of his treatise on the diseases of the eye, Mr. Dixon, whose opinion is entitled to the greatest respect, refers to the operation in the following terms : "For

myself, I may state that, although I could not recognize as sound the theory upon which the operation was brought forward as a cure for glaucoma, I tried it in a series of carefully selected and well-marked cases of the following forms of disease: ‘amaurosis with excavated optic nerve,’ as Graefe has termed a peculiar morbid condition; chronic glaucoma, where the lens had not yet lost its transparency; and in cases of acute glaucoma, characterized by sudden impairment of sight, rapidly followed by inflammation of the eyeball, dilated and fixed pupil, severe neuralgia, and total loss of vision. In neither of the two first classes did I find—nor had I expected to find—any improvement to result. Nor in the third class was sight restored; but the inflammation seemed to be arrested, and the neuralgia was either very much lessened or it wholly ceased. I cannot, however, attribute this result to the removal of a portion of the iris, but merely to the evacuation of the aqueous humor through the large corneal wound.’]

N. A. Med. Chin. Rev.

2. *On a Case of Traumatic Tetanus treated with success by Injections of Sulphate of Atropia.* (Gazette Médicale de Lyon, May 1860.)

Dr. Dupuy has recorded a case of traumatic tetanus in which the subcutaneous injection of sulphate of atropia was employed with success. The patient was a young man who had suffered a comminuted fracture of the index finger, followed by tetanus. Extract of belladonna was administered without any appreciable effect, and the tincture was equally unsuccessful. The surgeons in attendance removed the splinters of bone under the use of anaesthetics, but on awaking the patient was more agitated than before; the jaws could scarcely be opened, and the trunk rested only upon the occiput and pelvis. The dose of extract of belladonna was doubled, but without apparent effect. As the disease was still advancing, and the means hitherto employed were unsuccessful, it was determined to inject with sulphate of atropia. Twenty-five drops of a solution were injected by means of a syringe into the subcutaneous tissue of the lumbar region. At the end of a quarter of an hour there were symptoms of poisoning by belladonna, the agitation of the patient being so great that two persons could scarcely restrain him. This state continued for some time, after which he fell asleep for three hours. The stiffness of the lower limb then diminished

and the patient could bend his knees, but the opisthotonus and trismus remained. Another injection was performed in the lumbar region, and was also followed by symptoms of poisoning. The patient afterwards slept for five hours, and from this time the symptoms gradually diminished ; the wound being dressed with a pommade containing belladonna.

IV.—OBSTETRICS, &c.

Quadruple Births.

A case of Quadruple Births was narrated by Mr. Times. The great rarity of quadruple births—according to Collins' statistics, one only in 129,172 births—induced the author to lay the case before the Society. The patient, aged thirty-three, was pregnant for the fifth time. She was taken in labor on the morning of September 23. At eight p. m., a female child was delivered by the midwife in attendance ; ten minutes after a second child ; and twenty minutes afterwards a third, were born. Then followed a very large placenta, when the midwife, finding there was still another child, sent for Mr. Times. The placenta had drawn down the abdomen of the remaining child. After a little manipulation the feet were drawn down, and delivery of this, the fourth child, effected. The first three were alive and crying ; the last never breathed. There was little haemorrhage. The previous pregnancy terminated at eight months, in December, 1859. The last catamenial period was during the first week in March, but the discharge was so scanty that she conceived herself to be then pregnant. Hence the quadruplets were probably between six and seven months old. The children were all well formed, all upwards of twelve, and one thirteen inches in length. The first lived seven hours ; the next two, three hours. The placenta was single, but each funis had a distinct attachment. There was no lobulation of the placenta. The patient recovered well. Dr. Bloxam stated that in a case which came under his own observation, all four children were born alive, and at the full term. The President made some interesting observations respecting plural births in gen-

eral. He believed that, as stated by Hohl, the size of the abdomen was no criterion. Hohl found that in cases of twins, the abdomen was not often larger than in ordinary cases. He knew of a case in which the same woman had quadruplets twice within the year, and he had heard of cases of triplets, twice or thrice over. He was himself one of six children, the six being the result of two pregnancies, one of which resulted in the birth of twins, in the other quadruplets. In answer to a question of Dr. Tanner, as to the greatest number of children he believed had been born at once, he referred the Society to "Burdach's Physiology," in which several very remarkable cases would be found quoted. If he the (President) recollects aright, there was one instance, if not more, in which six children had been produced at a birth. *Proceedings of Obstetrical Society.*

EDITORIAL AND MISCELLANEOUS.

CO-EDITORS.

Upon referring to the list of Co-Editors, our readers will see that to the distinguished names which have composed it for the past year have been added those of Dr. Richard McSherry, and Dr. Thomas H. Buckler, of Baltimore, and Dr. William T. Howard, of Warrenton, North Carolina.

The former of these gentlemen has been an assiduous and welcome contributor to the *Journal* for some time past. The latter are well known as able and scientific physicians and writers of distinguished ability.

We anticipate much pleasure from the association which has been thus formed, and which we are sure will not be without profit to our readers.

ENLARGEMENT.

It will be perceived that we have enlarged the *Journal* to ninety-six pages—an act rendered necessary by the amount of material at our disposal requiring publication. We depend upon our corps of contributors to enable us to continue this number of pages as our regular monthly issue.

We extract the following from a Parisian Letter to the *New York World*. The case has been referred to by several of the recent medical journals, but in none have we seen so full an account as the one below.—[Eds.]

A fact of considerable interest to medical men has just been reported to the academy of medicine by the Surgeon of the Hospital St. Eloi, at Montpelier. Professor Buisson, the Surgeon in question, states that on the 1st of August, 1858, a man about fifty years of age was brought to the hospital by persons who were not able to give any precise information with regard to him, and the patient himself, being interrogated, gave incoherent responses. It was found, however, that he exhibited none of the signs of paralysis, that he had no fever, or any symptom of an acute disease. Upon examining his eyes, it was ascertained that he was deprived of sight by the existence of a double cataract. The patient could himself give no information as to the time which he had been afflicted, and in answer to all questions, continued to give utterly unsatisfactory and incoherent replies. The person who had brought him to the hospital, informed the Surgeon that he was in the habit of talking this way, of being continually murmuring to himself, and that he appeared to take no cognizance of what was passing around him. His appearance, and the facts which he was able to gather, satisfied M. Buisson that the unfortunate man was, at the same time, suffering under blindness and dementia. Fifteen days his symptoms were closely observed, and he was, during this time, placed upon a severe regimen, for the purpose of removing the effects of any recent morbid influence. No marked change, however, ensued ; he still exhibited the same degree of imbecility, and when spoken to in relation to an operation for his cataract, he exhibited no sign of satisfaction or of hope. In short, he continued to exhibit all the usual symptoms of dementia, and the surgeons satisfied themselves entirely that this was not the result of the abuse of alcoholic drinks, or that it followed any sudden shock of the nervous system. The patient had been a daily laborer, working upon a farm, and had continued his labor up to the time when the total loss of sight prevented him from working longer.

M. Buisson endeavored to ascertain whether the enfeeblement of the intellectual faculties in the case of this patient had commenced before or simultaneously with his loss of sight. It is a fact well known to medical men that blindness

often follows cerebral affections, but in these cases it is of a purely nervous nature ; it is *amaurosis*, that is to say, a paralysis of the retina, resulting from the general paralysis. But this was a case of an entirely different nature—the blindness here having a well defined anatomical cause. The patient was afflicted with cataract, which is a physical alteration of the crystalline lens, an affection which does not in the slightest degree depend upon the condition of the brain. With all his exertions, however, M. Buisson was not able to determine whether the blindness had preceded or followed the mental disease.

Such was the condition of this patient when M. Buisson determined to restore his sight by performing the usual operation for cataract, which was done upon both eyes on the 16th of August last. He was placed under the influence chloroform, and was in such a profound condition of *anæsthesia* that the first stroke of light upon the eye did not even cause a contraction of the pupil. The usual dressings were placed upon the eyes, so that the light should be excluded, and the patient being placed in a straight-jacket, in order to prevent him from touching his eyes, was carried to his bed without exhibiting the slightest knowledge of what had passed ; and during the ten days that he was confined in a dark chamber, he gave no sign of intelligence or of any consciousness that he had submitted to any operation whatever. On the tenth day, the bandages were carefully removed and the light gradually permitted to break upon his eyes. For the first time since his admission to the hospital, he gave a sign of intelligence. A smile—silly, but joyous—spreading over his whole face, and he cried “I see ! I see !” These were the first reasonable words to which he had given utterance since he had been in the hospital. Day after day, gradually, he was allowed to have more light, and day by day, as the experiments confirmed the perfect success of the operation for the cataract, they also proved what had not been dreamed of—the return of reason. As his sight became stronger, the patient became more docile. Less contrary and less indifferent to questions put to him, he began to make ready and reasonable replies. Every day marked the return of intelligence. He recognized objects about him, and uttered their names with a childish joy, and reached out his hands to seize them. This new ocular education, however, was not long required. His memory returned to him with a daily appreciable strength, and his intellectual faculties began to exhibit themselves. He de-

manded an augmentation of his ration, desired to get up, and already began to talk of leaving the hospital. Still, as his sight grew stronger, his words grew plainer and more consecutive, and his ideas clearer and without incoherence, and the memory of events which occurred prior to his loss of sight began to break upon him. It was impossible, however, to ascertain with any degree of certainty when his mental powers began to fail, or were lost, and all that could be learned of his loss of sight was, that it commenced about three years ago. A month and a half after the entrance of this man, blind and demented, into the hospital, he was at work again, with his vision and his mind restored. The man was completely metamorphosed, not only in the condition of his ideas, but also in his bearing and features, which previously fixed and stupid, were now doubly illumined by the restoration of sight and reason.

These are the details of this extraordinary case, and as they are somewhat long, I will leave all comments and speculations upon them to those of your readers who may be interested in them, simply remarking that they have excited a great deal of curiosity and discussion among the *savans* of the Academy of Medicine. The question which, with the facts before them, they have endeavored to solve is, whether this recovery of reason following the recovery of sight was a simple succession of facts, or whether it has a natural effect. M. Buisson sustains the latter theory with a great deal of vigor, and it is probable that the faculty will be on the look out for other cases of a similar nature, in order to further test the truth of his theory. At any rate, as an isolated fact merely, this case is an extremely interesting one.

FALSE MEMBRANE IN DIPHTHERIA.—In several good cases Dr. Beale could find no traces of fungi. In one specimen in which vegetable organisms were discovered, they were proved to be of accidental presence. The membrane seemed to be delicately fibrilated in its entire thickness, and contained a number of small faintly granular corpuscles. In some cases the membrane was quite composed of cells, closely agreed in character with pus-corpuscles. Several interesting cases illustrating the general and minute structure of the diphtheric membrane may be seen in the last volume (No. X) of the "Transactions of the Pathological Society," pp. 311-334.

A LEARNED OCULIST.—M. Sichel is one of the most celebrated ophthalmologists of his day. His professional works are well known: *Traité de l'Ophthalme*, etc., his “*Mémoire sur le Glaucoma*,” his clinical lectures “*Sur les Lunettes*,” and a vast number of other publications in Medical journals. We hear also of numerous precious *opusculles* still unedited, and of materials collected for a Complete History of Ophthalmology. To study the ancient authors, M. Sichel has made himself master of Arabic. Then we have that splendid work, “*L'Iconographie Ophthalmologique*,” wherein art and science are equally highly developed, and to the completion of which its author has consecrated thirty years of his life and a portion of his patrimony. You have also heard of his passion for entomology. Who has not seen him on Sunday, rushing along the Chausee d'Antin, escaping from his eight or ten hours a-day of consultations, a green box under his arm, and a little net in his hands, running to the railroad like a school boy, in order to ply his entomological skill in the charming woods of Ville d'Avray? All the world knows that he is as skilled an entomologist as he is an oculist. But what, perhaps, you do not know, is that M. Sichel, Doctor of Medicine, of Surgery, and Philosophy, Licentiate of Letters, Member of a crowd of Academies and learned Societies, decorated with endless orders, etc. etc., is a Latinist, an Hellenist of the first order, and a consummate archæologist. His work on “*Les Cachets Oculistiques Romains*,” is well known. His researches on “*La Déesse Angérone et le culte Secret de Vénus chez les Romains*,” made a great noise when they appeared in 1846 and 1847. Then again Medical literature owes to him the publication, with French translation, commentaries, etc., of a Greek poem previously left in MS. in the Bibliothèque de Paris. Now we find him coming forward to undertake, at M. Littré's request, the arduous and difficult task of reviewing, translating, and commenting, the Greek text of Hippocrates On Vision, for publication in the ninth volume of the works of Hippocrates, which have been for so many years in the course of publication by the learned Academician. Few people have an idea of the labor undergone by M. Sichel in accomplishing his review of these five or six pages of the Treatise of Hippocrates on Vision. He has had to compare time after time, and word by word, eight Greek MSS. in our Bibliothèques, one MS. in the Bibliothèque Medico-Laurentine of Florence, three others in Venice and Copenagen, the variations of two MSS. in the Library of St. Marc, at Venice,

the MS. notes added by James Cornarius to his Aldine copy of Hippocrates; to consult two Arab MSS. in the Bodleian Library at Oxford, erroneously considered as a version of the "Book on Vision," and found by the learned oculist, to his great disappointment, to be merely an Arab treatise on Diseases of the Eye, to which the author, who is unknown, has though fit to attach the name of the Physician of Cos. He has had to review all the editions of Hippocrates from 1526 to the present time—more than a dozen; to divide the work into chapters; explain the most important parts; to run through Mercuriali, Haller, Gruner, Fabricius, Jugler, Kühn, Dezimeris, Andreæ, etc., all of whom deny that this treatise was written by Hippocrates; and lastly to translate into French these memorable pages, where for the first time we find the rational treatment of granulations of the eyelids laid down. M. Sichel has developed himself thoroughly in this work. He is, indeed, a man for whom the tumult and amusements of the world have no attractions, who passes his life between medicine, the study of natural sciences, and the cultivation of letters; and who, so far from seeking to increase his practice, does all he can to limit it.—*L'Union Med.*

A DREARY PROSPECT.—The *Revue Contemporaine* publishes a very curious article, by Baron Ernouf, entitled "*De l'Appauvrissement du Sol et des Moyens d'y Remédier.*" Is it true that, owing to the gradual increase of population, the surface of the earth is destined, in the course of ages, to refuse its aliment to the human race, and that a day will come when the sun shall shine on an unpeopled and desert globe? Such is the question asked by the author of the article—a question started by many eminent men since the commencement of the present century. It is a positive fact that, in consequence of the populous state of many countries which, during the middle ages, were but feebly peopled, it has become impossible to leave a large quantity of land alternately fallow for a certain time, until the soil has regained the phosphorus which, under different forms, it has yielded to the grain so necessary to the sustenance of man. It is equally true that the manure spread over the fields is insufficient to renew the supply of phosphorus; and that countries, like Mesopotamia for instance, which in the olden time were remarkable for their fertility, have since been trans-

formed into deserts. Nor can it be denied that in taking food we absorb an enormous quantity of the fertilizing element—phosphorus—in order to build up and repair our osseous system, which is almost exclusively composed of phosphate of lime. Did we, on quitting this sublunary abode, restore to the earth what we received from it, the loss to the community would be comparatively small; but this is what we do not; our dead are enclosed within stone vaults or impenetrable coffins, and thus out of filial piety or respect for the dead in general, we are induced to withhold from our mother earth that very nutriment which she is so much in want of to feed us, while we multiply in nearly a geometrical ratio, and go on drawing upon her resources until she must be reduced in the end to a state of hopeless barrenness. And what is then to become of the human race? Will it have to live upon fish, or will anthropophagy be its last resort? To these dismal presentiments, the accomplishment of which we may comfortably view from the convenient distance of many centuries, Baron Ernouf replies by pointing out that from the moment chemists discovered that the great agent of fertilization is phosphorus under various forms, the problem may be considered in a great measure solved, since it is reduced to the simple condition of providing that great agent. Among the chief remedies against any deficiency in the natural supply, there are the importation of guano and the application of mineral phosphates to agricultural purposes; and, before these fail, other sources will undoubtedly be discovered by science. To these reflections of our author we may add that increase of population is invariably regulated by the means of existence, and that, whenever there is any danger of an excess of the former, Nature, applies a corrective in the form of some pestilence or other great calamity—even when men themselves do not, following their instincts, either destroy each other in battle, or drain off the surplus by emigration. These, history itself shows, are quite as natural checks, (though apparently of a political nature), as those alluded to which are independent of our will.

HEALTH OFFICE, BALTIMORE, NOVEMBER, 1860.

REPORT OF DEATHS in the City of Baltimore, for the Month of November. Arranged and reported for the Maryland and Virginia Medical Journal, by J. GILMAN, M. D., Secretary of the Board of Health.

Apoplexy	4	Inflammation of Brain	11
Burn	2	" " Kidneys	1
Cancer.....	2	" " Lungs.....	5
Casualty	5	" " Liver.....	1
Child-bed	5	" " Womb	1
Colic	2	Intemperance	2
Consumption	57	Lock Jaw.....	1
Convulsions	9	Mania.....	1
Croup	22	" a Potu.....	2
Dropsy	10	Measles	2
" in the head.....	7	Old age.....	13
Dyspepsia.....	2	Organic disease of the heart.....	11
Debility	1	Palsy.....	6
Diphtheria.....	2	Poison.....	1
Drowned.....	3	Serofula	1
Dysentery.....	3	Teething	10
Erysipelas	1	Thrush	1
Fever, Bilious.....	2	Tumor.....	1
" Catarrhal	13	Unknown Adult.....	13
" Scarlet.....	12	" Infantile.....	42
" Typhoid.....	8	Whooping Cough.....	4
Inflammation of Bowels.....	4		
Under 1 year.....	69	Between 70 and 80 years.....	13
Between 1 and 2 years.....	25	Between 80 and 90 years.....	6
Between 2 and 5 years.....	35	Males.....	147
Between 5 and 10 years.....	20	Females	161
Between 10 and 15 years.....	7		
Between 15 and 20 years.....	10		308
Between 20 and 30 years.....	21		
Between 30 and 40 years.....	34		
Between 40 and 50 years	25		
Between 50 and 60 years.....	21		
Between 60 and 70 years.....	22		
		Still Births.....	26

The foregoing table shows the number of Deaths, with their causes, for the month of November, 1860. This is a small increase upon the total of the last year during the same month, but $20\frac{1}{2}$ less than the average for the last ten years, the total of the last ten years for this month being 3,285.

Owing to a want of Registration Law in our city and State, we find it more difficult, than it would otherwise be, to arrive at even an approximate accuracy as to the cause of death. For this reason we employ the term Unknown, (Adult and Infantile,) which, as will be seen, furnishes an aggregate greater than from any other single cause, not excepting Consumption, which stands first and unrivaled in the catalogue of certain diseases.

During the last decade our city has been remarkably exempt from epidemics of all kinds. Measles prevailed during the autumn of '52 and '57, proving fatal in the former year in 314, and in the latter in 205 cases. In 1858, Scarlet Fever and Small Pox became epidemic, the Fever carrying off 535, and the Small Pox 310 persons. In the succeeding year '59, there was but a single death from Small Pox, while Scarlet Fever proved fatal in 301 cases. These constitute all the epidemics that have occurred in our city during the past ten years.

Our ratio of deaths to population has been gradually diminishing during the same space of time, until the past year showed a proportion of deaths to population of 1 in 54.12, or about 1.84 per cent., a degree of healthfulness almost equal to the rural districts.

 Of which number, 61 were colored persons; 51 free, 10 slaves.

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No personal matters, unless of general interest to the profession, will be published, except as advertisements, and as such must be paid for.

All communications for publication must bear the signature of the writer.

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THE
MARYLAND AND VIRGINIA
MEDICAL JOURNAL.

Vol. 16---No. 2.

FEBRUARY, 1861.

New Series.

ORIGINAL COMMUNICATIONS.

ART. I.—DEATH FOLLOWING THE INHALATION OF CHLOROFORM,

BY JOHN B. PORTER, M. D., Surgeon U. S. Army,

AND

CHARLES H. BREWER, M. D., Assistant Surgeon U. S. Army.

(Communicated in a report to Bvt. Brig. Gen. THOMAS LAWSON, Surgeon General U. S. Army.)

Private Henry Shields, Company B, Second Dragoons, was received into hospital at Camp Floyd, Utah Territory, about 1 o'clock P. M. September 15, 1860, four days after the occurrence of dislocation of the first phalanx of the left thumb backward on the metacarpal bone. This had taken place while the man was on detached service. The displacement was caused by the thumb having been caught in a lariat which was attached to a restive horse, and in consequence the joint was severely wrenched and somewhat distorted. Every rational effort was made for reduction by the usual methods, especially that of Dr. Crosby, of New Hampshire, so well described in the *American Journal of Medical Sciences*,

April, 1858, but ineffectually, and it was proposed that chloroform should be employed before further efforts were made. But in consequence of the man having indulged in liquor previous to entering hospital, it was thought proper to postpone the administration of this remedy for the time. Cold water application directed.

September 16: Cold water application continued, and a cathartic of senna and magnes. sulph. was administered.

September 17: Medicine had operated, the swelling and inflammation had entirely subsided, and it was decided to administer the chloroform in the afternoon, the patient in the meantime to have no food, as he had taken breakfast. Before the inhalation was commenced he was subjected to a careful examination. Aged 24 years; 5 feet $7\frac{1}{2}$ inches in height; of healthy appearance, and slender build; and a careful examination of the heart, lungs, corneæ, etc., showed him to be in good condition. By his own statement, he was of good habits; had never had palpitation of the heart, disease of the lungs, giddiness, nor fits of any kind; and no contra indication to the use of the remedy was discovered to exist. He made no objection to the employment of chloroform.

About $3\frac{1}{2}$ o'clock P. M., the patient having been placed in a recumbent posture near an open door, with his clothes freely loosened, the inhalation was commenced. One fluid drachm of chloroform was poured upon a small linen handkerchief folded in funnel shape and applied to the nostrils, and this was frequently withdrawn for a moment to permit sufficient air to become mixed with the vapor.

The effects became first apparent by a slight jactitation of the head and staring of the eyes, followed by tossing about of the arms, efforts to arise from bed, and noisy inarticulate exclamations. The muscles were somewhat rigid; pulse good. Another fluid drachm was applied to the handkerchief and held a short distance from the nostrils, when he became more quiet, and the pulse calmer but good. Just as the third fluid drachm was about being poured on the handkerchief he was pronounced relaxed. At this moment foam

appeared on the lips, the patient gave a stertorous inspiration and a convulsive extension of the limbs, and the pulse ceased in an instant. It is not certain that the patient ever breathed again.

Cold water (which was close at hand) was immediately poured over the head and face, more fresh air admitted, artificial respiration by Dr. Marshall Hall's method promptly induced, ammonia applied to the nostrils; the mouth and fauces were moistened with brandy, sinapisisms were applied to the spine and extremities, and frictions with whiskey and capsicum used to the body and limbs, but all proved of no avail.

September 18: Examination *post mortem* eighteen hours after. Externally, much congestion was apparent over the whole surface of the body, particularly of the face, neck and upper extremities; rigidity of the neck and limbs; discharge of frothy blood from the mouth during the night.

Sectio Cadaveris.—Much congestion of the vessels of the scalp on making the incisions, followed by slight discharge of blood, and the whole scalp appeared to be somewhat thickened by engorged blood-vessels. During the opening of the cranium about one pint of dark colored blood flowed from the vessels. The dura mater and the pia mater were engorged with blood. The cortical substance of the cerebrum presented a normal appearance, but the medullary portion was punctatedly injected, dark blood oozing out on pressure.

On opening the lateral ventricles, a mixture of blood and serum was found, the right containing about a teaspoonful, the left somewhat less; the plexus choroides were greatly engorged with blood; and the corpora striata and other portions were injected. The right ventricle was more engorged in all parts than the left. The other ventricles presented a natural appearance. Both the arteries and veins of the surface of the cerebellum were filled with blood, and the two sets of vessels could be easily distinguished, the arteries being of a vermillion hue and the veins of a dark purple. The

central substance (arbor vitæ, &c.) was diffusely injected on the right in a much greater degree than on the left.

Thorax.—The lungs presented no unnatural appearance; the posterior portions were somewhat darkened by the gravitation of the circulating fluids. The pericardium contained something less than a teaspoonful of serum. The heart itself was of a healthy appearance—somewhat smaller than the usual standard; tissue solid: and perhaps there was a little more fatty matter about the auricles than usual, but nothing like fatty degeneration. It contained about four ounces of fluid blood, and the valves were perfectly healthy.

The patient was in the habit of indulging in the free use of ardent spirits to intoxication.

The purity of the chloroform (which is reserved for future tests) was not tested for want of sufficiently pure and strong sulphuric acid. The chloroform was sent out by the Medical Purveyor in New York, and is the same as that used in the operations at Camp Floyd during the past year. Chloroform from the same bottle was used in the cases of Frank Mathews and Henry Shields.

Professor Syme has stated that he had “never seen a fatal case from chloroform, and that he thought all danger incurred in its use arose from bad management.”—(*Am. Med. Times*, No. 12, Vol. 1, p. 214.) In this case every precaution was taken to insure safety. The time occupied in administration was less than three minutes, and the handkerchief used was often removed from the patient’s nostrils. A remedy which requires so many rules and so much caution for its administration must be regarded, to say the least, as not a safe article.

ART. II.—NOTES OF A CASE IN WHICH THE INHALATION OF CHLOROFORM PRODUCED ALARMING SYMPTOMS.

BY JOHN B. PORTER, M. D.,

Surgeon U. S. Army.

(Communicated in a report to Bvt. Brig. Gen. THOMAS LAWSON, Surgeon General U. S. Army.)

Frank Mathews, a thick set and strongly built man, 26 years of age, 5 feet 5 inches in height, in the employment of the "Pony Express Company," on the route between Salt Lake City and Carson Valley, was admitted into the post hospital at Camp Floyd, Utah Territory, about 3 o'clock P. M. on the 17th of July, 1860, for a gunshot wound received by the accidental discharge of his own rifle about daylight on the morning of the 15th. The man states that he was one of a party in pursuit of Indians, and as the party was making its way silently after them, in climbing a steep rock he used the rifle as a support, when it exploded, the charge entering the back of the left arm, lacerating the soft parts, shattering the bone, and making its way out on the front of the limb. Although the arm was frightfully torn and the bone badly broken, the brachial artery was not injured; pulse at the wrist regular and perfect to the last. On admission into hospital, about sixty hours after the injury, the wound was in an unfavorable condition, having never been much dressed nor cared for during the journey to Camp Floyd. The parts were much swelled and infiltrated, and the tumefaction extended beyond the shoulder to the neck and back; the surface of the wound was in a state of sphacelus and the odor very offensive; pulse 110; bowels constipated; in other respects (as regards tongue, thirst, and general condition,) the patient looked well. Directed lotion of liq. sodae chlor-niat. $\frac{3}{4}$ i to 0 j, and infus. sennæ and magnes. sul., which acted well.

The feverish symptoms gradually abated without the use of much medicine, the appetite continued pretty good, and the patient was allowed nutritious diet as suppuration became established.

On the 18th, the day after admission, the wound was discovered to be full of small maggots, which increased rapidly to a large size.

20th : The wound was filled with lint well wet with sol. acid. tannic. gr. v to $\frac{3}{4}$ i, and the chlorinated lotion was continued over the whole arm and shoulder. Nothing else was applied until the wound was so far recovered as to require only simple dressings. The wound improved, the swelling decreased, healthy suppuration was established, and granulation went on rapidly ; but no union of bone took place. Before the end of July diarrhoea (never very obstinate, but often troublesome,) set in and required pul. Dover, pill. opii et plumbi acet., tinct. opii et tinct. catechu, etc., although not in large doses and only once or twice in twenty-four hours, and an occasional small dose pulv. rhei. Brandy was added to the list of medicines at the beginning of August ; the lotions were omitted on the 19th of the same month.

The broken bone did not unite, and the arm was useless. All fever symptoms having subsided and the diarrhoea abated, it was decided that amputation should be performed, which was done on the 26th of August.

The operation was performed by the circular mode and the first incisions were made as near the wound as possible, in order to obtain a stump and avoid amputation at the shoulder joint. Dr. J. J. Hull, who had come from New York with recruits, and Lieut. Dudley, Tenth Infantry, assisted, and their services are duly appreciated. Chloroform was administered, and as soon as the patient came under its influence Dr. Hull compressed the subclavian artery in the usual manner, and the operation was completed without accident. Owing to the conformation of the clavicular region, it was more difficult than usual to make sufficient compression to arrest the circulation. This was skillfully accomplished by Dr. Hull, and but little blood was lost during the operation.

Examination of the Limb.—The bone was found broken, and a sharp fragment projected forward so as to nearly protrude externally. No attempt at union had been made, and

the fractured ends of the bone were surrounded with pus. Had the limb been suffered to remain, the patient would have probably sunk under hectic and diarrhoea ; perhaps pyæmia would have supervened.

High fever followed on the 27th-30th ; then profuse suppuration ; and on the 2d of September the patient was put upon the use of brandy and milk punch, and an anodyne at night, generally combined with plumbi acet. or tinct. catechu, as the bowels had again become disordered. By September 30th all medicine was discontinued, and the patient left the hospital on the 6th of October.

In this case, during the inhalation of chloroform, before the patient came sufficiently under its influence, there was violent tossing of the limbs, efforts to get out of bed, frothing at the mouth, vomiting, and great hyperæmia of the conjunctival vessels ; and it must be confessed that apprehensions were entertained in regard to the patient's safety. After amputation, there was extreme sensitiveness of the stump and the lightest touch caused pain, yet it was not thought advisable to repeat the chloroform.

The patient's habits, according to his own account, had been good ; states that he had taken an occasional glass, but that he had not been even slightly intoxicated more than once or twice in his life ; and it was evident during the progress of the case that he had been temperate. He is indebted to his evidently temperate habits and sound constitution for the preservation of his life.

The French surgeons in the Crimea, if my recollection is correct, were much more partial to the use of chloroform in operations than the English. May not the difference of race and national habits render the use of so potent a remedy much safer with the one people than the other ? It is certain, in my opinion, that hard drinkers cannot inhale chloroform with safety.

ART. III.—SPONTANEOUS CURE OF CATARACT.

REPORTED BY ST. GEO. PEACHY, M. D.,

RICHMOND, VIRGINIA.*

J. B. McCAW, M. D.

Dear Sir:—If the following singular case of spontaneous cure of cataract is of any interest to you or your readers, you may make such disposal of it as, in your judgment, seems proper:

Mr. M——, a gentleman now about fifty years of age—perhaps more—was attacked in 1835 with an inflammation of the left eye, from which he suffered much pain. According to his account the whole globe was more or less involved and, to use his own words, “it seemed that his eye-ball would burst from pain, throbbing and swelling.” The general inflammation became assuaged, yet he continued to suffer from time to time excruciating pain, while he never enjoyed perfect exemption from uneasy sensations at any period while awake and attending to his ordinary affairs of life. He made use of green glasses with lateral appendages of same color. The function of the right eye became involved. Though impaired, it never failed him entirely, nor to an extent authorizing surgical interference with the one first affected. In the course of time the left eye became thoroughly cataractous and remained so for many years; the right eye still enabling him to see quite well, though with pain and impairment of vision. I have seen Mr. M. very frequently during the last four years, and have often noticed an unusual protuberance of the left globe, which would not have attracted observation had it not been compared with the right eye and presented a dense, solid mass behind the pupil. The vacant wandering of the left eye was in strange contrast with the fixed purpose of the

* We call especial attention to this unique case of spontaneous rupture of the capsule of a cataractous lens, discharging the opaque mass through into the anterior chamber and ultimate absorption, leaving perfect vision as the result. We can find no such case recorded.—Eds.

right. The habits of Mr. M. have always been extremely correct. I doubt that he ever committed an imprudence. His passive emotions are easily aroused, and but a trifle brings him to tears. He is very sensitive, and the offer of a benefit to him moves his feelings more than an actual maltreatment. He has not a trace of primary or secondary affection of any character. He is constantly in open air and exercising on foot. Such is and has been his constant habit of life. I mention these details in their bearing upon his disease and the part which the brain may have had in its production. Several months ago, Mr. M. felt a renewal of the fulness, he first spoke of, in the globe of the eye—pain accompanied it, and suddenly he felt “something give way.” To his astonishment, upon raising the lid, his sight had been restored to him as if by miracle, and for six months he has enjoyed as perfect vision as ever. In proof of this last assertion, in the presence of myself and others, he has read with the left eye alone, an ordinary newspaper print with perfect ease and without the aid of glasses. The lens escaped into the anterior chamber, fell below the axis of vision and has been undergoing gradual absorption. It was hard lenticular cataract, judging from its size and the amber color so frequently mentioned by writers on this disease. The right eye has recovered its normal vigor, and Mr. M. now has perfect vision and no pain. Excepting the small amber-colored body resting against the lower margin of the cornea, within the anterior chamber, no one would discover that Mr. M. had suffered from any such affection as that of which I have given you the above description, and of which I can find no such termination in any work in my possession.

ART. IV.—CONTRIBUTIONS TO PATHOLOGY.

BY JAMES H. BUTLER, M. D.,

Demonstrator of Anatomy in the University of Maryland. Late Resident Physician in the Baltimore Infirmary.

CASE 1. *Aneurism of the Aorta—Spontaneous Cure.*

Thomas S., by occupation a sailor, aged 45 years, was admitted into the wards of the Infirmary, sick at the time of entrance five months with chronic diarrhoea. The disease for which he entered the house for treatment was, he thought, first induced by poisoning from some preparation of copper that had been administered to him; and it was afterwards greatly aggravated by his vessel being shipwrecked, and he obliged to remain on a raft several hours exposed to severe cold.

The symptoms of disease presented by him, were pain in the region of the stomach and on pressure over the abdomen, frequent loose watery evacuations, great thirst, a dry harsh skin, furred and somewhat reddened tongue, accelerated pulse, a short hacking cough unattended, however, with any expectoration, and some degree of dyspnoea.

A physical examination of his thorax was made at the time of his entrance, but save weak respiratory murmur on both sides of his chest, and feeble impulse of his heart, nothing abnormal could be detected.

The enteritis, in spite of the best directed measures, became worse, and thirty-one days after his admission, he died.

An autopsy made nine hours after death revealed redness and inflammation of nearly the whole portion of the ileum, caecum and colon, besides some points of ulceration in the last named intestine. The lungs were found healthy and crepitant, no tubercular masses being detected.

An examination of the heart and great vessels, discovered to us the existence of an aneurism, the dilatation being about three inches long and two inches in diameter in the largest portion, occupying the ascending aorta and a portion of the

arch. The dilated portion of the sack had been filled up by the deposit of fibrine that had become organized, rendering the size of the tube the same as before and allowing the blood to flow through unobstructed, giving rise to no murmur whatever. The dyspnœa and cough now met a sufficient explanation; for the tumor pressing back upon the trachea, irritated the nerves there situated and gave rise to both symptoms.

This case can only be regarded as one in which the powers of nature, aided by the anæmic condition of the man, were sufficient to cure, by the deposition and afterwards the organization of fibrine, a disease in which doubtless both medicine and surgery would have failed; and we are forced to regard it as a case of spontaneous cure of aneurism of the arch of the aorta.

CASE 2. *Cystic Disease of the Kidney.*

Matthew M., aged 28 years, a native of Ireland, by occupation a laborer and of intemperate habits, entered the Infirmary August 4th, having been unwell at that time six months.

He had complained, for the time mentioned, with a sense of fullness in his head and dizziness, accompanied with nausea and sometimes with vomiting. These symptoms were not constant, but occurred every few days. During the interval he would enjoy tolerable good health. No cause could be assigned by him for his disease. About two weeks before his entrance into the house, he was attacked with very profuse diarrhœa, and he at once noticed that he was rid of his old affection; but the dysentery or diarrhœa proving very unmanageable, he obtained admission into the hospital. After an examination, it was thought advisable to endeavor to control the discharges, which were of a watery consistency containing some blood and mucus. By the 8th instant, the medicines which had been administered had afforded him some relief, but as the discharges from the bowels ceased, the stomach became irritable, vomiting ensued, and he sank

into a dull semi-unconscious condition. Coma rapidly supervened, and after remaining in this condition until the 10th he died, six days after his entrance.

A *post mortem* examination, made twelve hours after death, revealed redness, congestion and inflammation in different portions of the intestinal tract, softening of the spleen, and congestion of the mucous coat of the stomach. The heart, lungs and brain were healthy.

An examination of his kidneys showed at once the cause of his death, as well as of the symptoms we were unable to explain during life. The proper substance of the kidneys was filled almost entirely with cysts, containing a serous fluid and which rendered the organs totally unfit for their office of excreting the urine. That the diarrhoea in this case was only an effort of nature to remove from the system the poison, that had ceased to be eliminated by the kidneys, was now quite clear ; the disease growing worse as soon as medication was directed towards arresting the discharges from the intestinal canal.

CASE 3. *Abscess of the Liver—Occlusion of the Right Common Iliac Artery.*

Ernest V., a native of Sweden, aged 46 years, of temperate habits, and a sailor by occupation, entered the hospital on the 21st of February, complaining of a tumor, excessively painful, in the right hypocondriac region, of nausea and inability to retain solid food upon his stomach, of cough, and considerable mucous expectoration.

Upon examination, the tumor was found pointing in the region above indicated, and was evidently connected with the liver, which was greatly enlarged, extending downward to near the crest of the ileum. On questioning him concerning the origin of his malady, he admitted, that since suffering with bilious fever some two years before, he had always noticed a considerable fullness of that side, for which the tincture of iodine and blisters had been applied.

The disease being evidently chronic hepatitis that had ter-

minated in the formation of an abscess, the treatment was ordered to meet the indications. Internally tonics and stimulants were used freely, and anodyne poultices applied over the liver. In two weeks from the time of entrance the abscess opened spontaneously externally, discharging above a pint of pus, of offensive odor and of an unhealthy character. For a few days he appeared to be getting better, his appetite and general health improved, and the discharge from the abscess became less in amount; but about a week after its opening, he commenced to complain of coldness and some loss of power in his right leg. These symptoms gradually increased in intensity and the leg became ecchymosed and somewhat oedematous, and although friction by means of stimulating liniments was used and warmth applied, the coldness and loss of power continued to increase; the arteries, which at first beat very feebly, now ceased entirely, and it was impossible to detect any pulsation in the member.

The man died on the 20th of March, and an examination held shortly after revealed an abscess situated in the right lobe of the liver, adherent to the walls of the chest, and crossed at different places, by the proper substance of the liver; the organ was also adherent to the diaphragm and the colon. In the thorax the lower lobe of the right lung was somewhat carnified, and in the upper portion of the same lung, tubercular masses were disseminated. In the pleural cavity some slight effusion was found.

An examination made low down in the abdominal cavity to ascertain the source of the disease in the leg, disclosed a clot, blocking up entirely the common iliac, the external iliac, and a portion of the femoral artery, and extending also into the internal iliac artery, allowing no blood whatever to flow into the right lower extremity. On the left side no such change had occurred, the arteries there being pervious and healthy. That this change should have occurred on only one side, leaving the other in its normal condition, excited our astonishment, and for which we were unable to offer any reasonable explanation.

ART. V.—NITRIC ACID IN INTERMITTENT FEVER.

BY WILLIAM A. HAMMOND, M. D.,

Professor of Anatomy and Physiology in the University of Maryland.

The following table showing the results obtained in the treatment of a number of cases of intermittent fever is sufficient to show how valuable an agent the nitric acid is in the management of this disease. The table forms the basis of a report made about four years since to the Surgeon General of the Army, and has never been published.

The cases were treated at Fort Riley, Kansas Territory, in the post hospital, then under my charge, in a period of six weeks in summer.

Upon referring to the table, it will be seen that in all forty-one cases were treated, ten of these being of the quotidian type, and thirty-one of the tertian. Thirty-two cases were treated with the nitric acid, and nine with the sulphate of quinine. Of the cases cured by nitric acid three had previously used quinine without effect, and of those in which quinine had proved successful nitric acid had been employed without benefit in two, and in one other had to be omitted on account of causing nausea, heart-burn, &c.

The average period of treatment before the disease was permanently arrested was the same with each remedy—three days. The nitric acid was uniformly given in doses of ten drops (properly diluted with water) three times per day, the quinine in doses of eight grains three times per day.

Besides the fact that the nitric acid was equally successful with quinine in arresting the disease the difference in the cost of the two articles is so greatly in favor of the former substance, as to render it an object of importance to make its curative properties more widely known.

Nitric acid was first used as an anti-periodic by Dr. E. S. Bailey, of Indiana. Its peculiar properties were brought to the notice of the profession by Dr. George Mendenhall, in the *Western Lancet* for August, 1854. A notice of the dis-

covery is also contained in the *American Journal of the Medical Sciences* for October, 1854.

TABLE of Cases of intermittent Fever treated at Fort Riley, K. T., during the period commencing June 15th and ending July 30th, 1856.

Case.	Type of fever	Medicine used.	No. days under treatment.	REMARKS.
1	Quotidian	Nitric acid.....	6	
2	Tertian.....	Quinine.....	2	Had previously used quinine 6 days without benefit.
3	Quotidian	Nitric acid.....	3	Had previously used quinine 4 days without benefit.
4	Tertian.....	Quinine.....	6	Had previously used nitric acid 4 days without benefit.
5	....do.....	Nitric acid.....	8	Had previously used quinine and arsenic without benefit.
6	....do.....	....do.....	2	
7	....do.....	Quinine.....	2	
8	....do.....	Nitric acid.....	2	
9	....do.....	....do.....	1	
10	....do.....	Quinine.....	5	
11	....do.....	Nitric acid.....	3	
12	Quotidian .....	....do.....	2	
13	Tertian.....	....do.....	2	
14	....do.....	Quinine.....	2	
15	....do.....	Nitric acid.....	2	
16	....do.....	....do.....	2	
17	....do.....	....do.....	2	
18	Quotidian	Quinine.....	4	
19	Tertian.....	....do.....	3	
20	....do.....	Nitric acid.....	3	
21	....do.....	....do.....	2	
22	....do.....	....do.....	3	
23	....do.....	....do.....	3	
24	....do.....	....do.....	2	
25	....do.....	....do.....	3	
26	Quotidian .....	....do.....	6	
27	....do.....	Quinine.....	3	Had previously used nitric acid for 5 days without benefits.
28	Tertian.....	Nitric acid.....	4	
29	....do.....	....do.....	4	
30	....do.....	Quinine.....	3	Had previously used nitric acid, but the remedy disagreeing with the digestive organs quinine was substituted.
31	....do.....	Nitric acid.....	2	
32	....do.....	....do.....	2	
33	....do.....	....do.....	3	
34	....do.....	....do.....	2	
35	Quotidian .....	....do.....	4	
36	....do.....	....do.....	3	
37	Tertian.....	....do.....	3	
38	....do.....	....do.....	2	
39	....do.....	....do.....	3	
40	Quotidian .....	....do.....	3	
41	....do.....	....do.....	2	

Since the foregoing cases were treated, I have very frequently employed nitric acid in the treatment of intermittent fever, and have rarely been disappointed in my expectations of its curative action. In fact, in simple uncomplicated intermittents, I seldom have occasion to use anything else.

In cases of enlargement of the spleen, consequent upon frequent attacks of the ague, the remedy in question has, in my hands, proved very advantageous.

The whole subject is one of great importance to the physicians of malarious districts, and I trust will sufficiently engage their attention as to induce them to test the curative power of nitric acid in those cases of intermittent fever which may fall under their charge, and to add to the sum of our knowledge by reporting for the information of others the results at which they may arrive.

ART. VI.—STRYCHNIA IN “HAY FEVER” AND INFLUENZA.

BY JAMES DARRACH, M. D.

OF PHILADELPHIA.

Within the last few years it has been my lot to have several persons under my charge who were suffering from the affection known as “hay fever” or “hay asthma.”

The first case was that of a lady about 50 years of age, of nervous temperament, who had been afflicted with this malady for seven years previous to my seeing her. She had been under various treatment, but without obtaining alleviation. Her attacks occurred every year—almost to the day—on the 16th of August, and lasted from nine to ten weeks, during which time she was more than miserable. The onset consisted in unpleasant feelings in the nose, sometimes of a tickling nature. These lasted about two days and were soon followed by sneezing, extreme lachrymation and flowing of thin mucus from the nostrils. During the intervals of sneezing and lachrymation her head, especially in the region of the frontal sinuses, felt much constricted and painful, while the throat, fauces and soft palate Itched to a painful degree. At night the constricted feeling about the head would continue, together with a stuffing of the nostrils, which would prevent her breathing by the latter; and, to add to her misery, when she attempted to breathe by the mouth the tickling sensation in the fauces became intolerable.

The above symptoms were accompanied with coldness of the surface, especially of the feet and legs. During the attack her appetite and digestion were good, unless taken away by the use of nauseating and depressing remedies.

While listening to the recital by the above named patient of the phenomena of her disease, my mind was occupied by three prominent ideas in relation to the malady: 1st, its periodicity; 2d, its prolonged course; and 3d, that it was based on debility, and that this debility was owing to some mal-condition of the nervous system, which manifested itself in relaxed and weakened capillaries. Its periodicity suggested some anti-periodic; its prolonged course, that if the disease could not be cut short that at least depressing and relaxing remedies would most likely be injurious, however useful such remedies might be found in other acute affections of the respiratory mucous membrane; while the view which had been taken as to the condition of the capillaries, based on a debilitated nervous system, suggested the use of strychnia. That this remedy should exert a beneficial influence in the case seemed probable to me from the happy effects of it in the treatment of passive forms of dysentery and diarrhoea. Whether right or wrong in the above views, the result was most satisfactory, and also pleasing, that it was the application of principles, rather than empiricism which suggested the remedy. The strychnia was administered in this case in doses at first of gr. $\frac{1}{10}$, and afterwards gr. $\frac{1}{20}$, four times daily, and with most manifest relief, especially to the more decided influenza symptoms in the affection of the mucous membrane.

In addition to the above treatment the skin was stimulated by hot salt baths and frictions, and the extreme tickling of the fauces and soft palate was alleviated by a gargle of sulphate of zinc gr. v. to the $\frac{3}{4}$ i of water. The stuffing of the nostrils at night was relieved when necessary by a hot toddy. I attempted to cut short the disease by quinine, administering it for a few days before the expected attack, but without success. Fowler's solution was also used, and likewise failed.

This lady was under my care for four successive summers, and each season her attack was shortened from ten to five and three weeks, until, finally, the last season was passed with almost entire immunity from the enemy.

The second case which came under my charge was that of a lady about 33 years of age, also of extremely nervous temperament, who had suffered with the disease for the most of her life, and whose symptoms were much as mentioned in the above case, with the additional ones of almost constant lancinating pains through the eyes, with daily attacks of agonizing itching of the conjunctivæ.

The first of these symptoms was relieved by belladonna, and the latter by dropping in the eye a weak solution of salt and water. The strychnia gave most prompt relief to the influenza symptoms.

The third case was that of a man æt. 40 years, who had had the complaint all his life, and had been under respectable practitioners, and his report was that he despaired of relief. During the past summer he came under my charge, but neglected to place himself under treatment until he had been three days suffering from the attack. The symptoms were those of extreme influenza. He also told me that his bronchial tube soon became affected, which complication was not an attendant of the first two cases. He was immediately placed under the use of the strychnia, in the form of the sulphate, gr. $\frac{1}{6}$, four times daily, and in two days he was relieved—I may say cured—for the season.

A fourth case of this disease was treated by this remedy by another physician, in accordance with my advice, and the report was very favorable. I heard from the patient but once.

Since treating the above cases, I have given the strychnia in ordinary influenza in the case of a distinguished friend—a physician. On one occasion he mentioned to me that he was getting one of his attacks of cold, which usually lasted about three weeks, affecting his mucous membrane generally—bronchia, stomach and bowels—and usually ending with diarrhœa.

I found him sneezing, and his eyes and nose discharging heavily, and his skin relaxed, moist and cool. These symptoms, I thought, eminently indicated the above remedy, and by my advice he took gr. $\frac{1}{2}$ four times daily; and in two days was perfectly well. There was no return.

In connection with the above treatment, although it is not my intention to discuss the pathology of "hay asthma," much less that of influenza in general, I would add that living in the country always aggravated the symptoms to a great degree; also, as is generally understood, the smelling of flowers, and more especially the dust from hay, or the patient moving about where any fine particles are abundantly disseminated in the air.

The sea-shore life, which is considered beneficial to these cases, did not prevent one of my patients from having her usual attack, although by anticipating the time and gaining the shore before the attack, it seemed to have been retarded about a week; but while walking on the beach, against a strong cold wind, she felt her forehead over the frontal sinuses become cold, and soon after the disease came on in full blast.

Since the idea of the use of strychnia in this complaint first occurred to me I have discovered in the *London Lancet*, Vol. 1, for 1850, the mention of the successful use of nux vomica, by Dr. Greaves, in hay fever. Among the remedies which are highly recommended in this disease are tincture of lobelia and coffee.

ART. VII.—“A NEW CAUSE OF VESICO-VAGINAL FISTULA.”

BY WASHINGTON L. ATLEE, M. D.,

OF PHILADELPHIA.

In the latter part of November, 1860, a correspondent in Washington City, informed me that Professor Brickell, of New Orleans, had published a *critique* on my report of a case of vesico-vaginal fistula, which I had presented to the profession through the American Journal of the Medical Sciences for January, 1860. I immediately wrote to Prof. Brickell, requesting a copy of his paper, as until then I had been entirely ignorant of its existence. After waiting a month for a reply, I received a polite letter from him a few moments after I had mailed another repeating my request. In a postscript he says “You will find my criticism in the July, 1860, number of the Maryland and Virginia Medical Journal, published at Richmond.” I procured this number of the Journal, and find at page 37 this heading to the paper:—“*A New Cause of Vesico-Vaginal Fistula.* By D. WARREN BRICKELL, M. D., of New Orleans, Professor of Obstetrics, New Orleans School of Medicine. *Audi alteram partem!*”

I observe that Prof. Brickell takes exception, in my report, to the explanation there given of the *cause* of the fistula. It must have been apparent to Prof. B. that the main object of that explanation was to protect a professional brother from a threatened prosecution for supposed malpractice. This is a duty, in my opinion, we all owe to each other, when it can be done, as in this case, with justice and with truth;—for it is well known to the profession that a jury of non-medical men are incompetent to sit in judgment on a medical question; particularly when influenced by the specious reasoning of mercenary lawyers, and the testimony of unworthy, envious, or inimical medical competitors. Still, I would not vindicate myself, even on such a worthy motive, if I had been convicted by Prof. B. of having made an *erroneous* explanation. It may seem very strange to Prof. B. to be informed that his

learned criticism, which cost him so much trouble to get before the profession, has failed entirely in convincing me of error! And yet I am not surprised that he has made just such an argument as he has. The same points passed through my own mind while writing my paper, and I subjected them all to a rigid analysis, and yet arrived at the conclusion therein stated. So that, although I commenced my explanation with the motive above referred to, I am satisfied that it has led me to the discovery of "*a new cause of vesico-vaginal fistula.*" If, by the same line of argument, I was unable of convicting myself of error, Prof. B. will certainly pardon my perversity in not yielding to his higher authority, when these reasons are re-produced by himself.

I regret that Dr. Hays refused the insertion of Prof. B's paper in the American Journal of the Medical Sciences, and I also regret that Prof. B., on the principle of his motto "*Audi alteram partem,*" did not see the justice of placing the whole history of the case and my remarks in juxtaposition with his criticism. It would have saved me the trouble of giving the matter any further notice, as I should have willingly left both papers to the judgment of the same professional readers without comment. Even as it is, I shall enter into no controversy with Prof. B. on many of his vulnerable positions, leaving their detection to the good sense of the profession, but for his own instruction I will refer him to the anatomy of the female organs, both before and after impregnation, as a sufficient answer to the following queries in his criticism, at pp. 38 and 39:—

"What says the reader? Will he not agree with us, that the head of the child of the woman still in process of gestation is *in utero?* and being in *utero*, that it is therefore above any portion of the vagina? and being above the vagina, and dragged over so as to rest on the crest of the pubes, that it cannot possibly infringe on any portion of the *vesico-vaginal* wall—in which wall only can *vesico-vaginal fistula* occur? If imagination cannot carry you at once into the reality of the proposition, go to the *cavader*, take hold of the uterus,

pull it out of the pelvis, watch the location of the *vesico-vaginal* wall, and you will see what we mean. Not only the anatomy of the parts involved contradict this part of Dr. A.'s theory, but the plainest physical laws show that the head of the child can infringe on the vesico-vaginal wall only when *descending* through the pelvis, and that to draw the parts upwards while the head remains in *utero* can never result in like infringing. Under the anterior obliquity theory of Dr. A. there is but one portion of the bladder that could be caught under the head, and that is the portion of the organ in the region of its summit, and where it is covered with peritoneum, and a fistula occurring here would necessarily communicate with the cavity of the abdomen."

"But what says the reader? Does he really believe that the head of a child could press on the crest of the pubes, as described by Dr. Atlee, and produced sloughing of the tissues? Will he, like Dr. A., forget that there is first liquor amnii in the uterus to largely counteract the specific gravity of the child? and then forget that there is the thick and elastic uterine tissue between the vesical wall and the head, with an anterior vesical wall between the posterior wall and the pelvic bones? Will he believe that a head that is absolutely *in utero* can be pressed against the crest of the pubes by a posterior vaginal wall that is positively below it and not touching it? or, again, will he believe that a child that is lying at a right angle with the woman's body can have the *vertex* of the head pressing on the crest of the pubes? What a mess of anatomical and physical improbabilities!"

As I would not presume to teach a *teacher* of obstetrics, I beg leave to refer him to our great masters to illustrate the points above referred to. In "*Gray's Anatomy, Descriptive and Surgical*," Philadelphia edition, page 689, is a drawing, fig. 348, of the unimpregnated uterus. The cervix uteri *dips down* into the vagina a considerable distance, or, in other words, the wall of the vagina is inserted into the cervix *far above* the os uteri. In "*Ramsbotham's Obstetric Medicine and Surgery*," fifth edition, Philadelphia, p. 114, are two

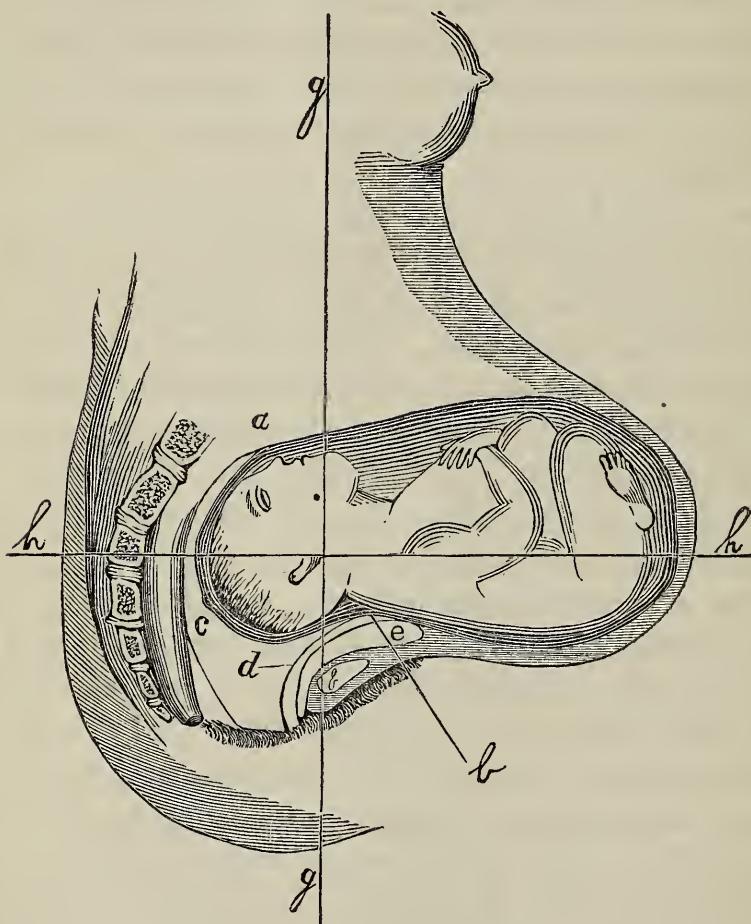
drawings, figs. 85 and 86, of the uterus at the full period of gestation, in precisely the same condition in relation to the vagina. Every obstetrician will admit that these drawings accord with his own experience. Therefore, the head of the child, *even while in utero*, at full period and approaching it, *descends below the level of the insertion of the wall of the vagina*. Again, at pp. 144 and 160, of the same work, are two figures, 92 and 93, showing how the uterus can “*elongate the vagina, and with it drag up the bladder and curve it over the crest of the pubes.*” Every accoucheur knows that the uterus, at full period, is entirely above the brim of the pelvis, and that it necessarily must elevate with it *both the vagina and bladder* precisely as described in standard works of midwifery.

Now apply these incontrovertible facts, selected as they are from the highest authority, to the case reported by me: The patient, in an upright position, attending to her daily domestic duties: the uterus, with its fundus thrown forwards, so that its long axis is at right angles with the longitudinal axis of the body of the mother; the child in utero, with its back downwards, its face upwards, and the *vertex resting against the top of the pubes*; the *anterior wall of the vagina, and the bladder, both stretched over the brim of the pelvis* by the large gravitating uterine body; and the posterior wall of the vagina, which is inserted into the uterus at a point *above the forehead* of the child, and like a bandage binds the *vertex against the crest of the pubes*—taking all these circumstances together, I, therefore, repeat that, without attempting to “rummage for excuses,” and in spite of Prof. B’s “mess of anatomical and physical improbabilities,” as the *necessary consequence* of this abnormal relation and condition of the parts, the only plausible, true, legitimate, and logical explanation of the fistula is the one which I have given, *particularly as there was no other adequate cause*.

With regard to the unjust insinuations made by Prof. B. against Drs. Weatherby and Clark, as having “added to the black list of so-called accidents which disgraces the records of

obstetrics," I may here remark that on his own admission he cannot compare in age or experience with either of those gentlemen; and as to practical skill in "managing difficult labor," I presume they would be able to vie with certain obstetric professors, and, perhaps, even triumph over *their* "shortcomings."

I may also remark, that in an extensive practice of over thirty years, I have yet to learn that, either in the impregnated or non-impregnated uterus, the cervix uteri occupies a



EXPLANATION OF THE CUT.

- a. Insertion of the posterior wall of the vagina into the cervix uteri.
- b. Insertion of the anterior wall.
- c. Os Tincæ.
- d. The point where the vertex rested, and where the fistula occurred.
- e. Bladder, dragged over the pubes.
- f. Pubes.
- g. g. Axis of the mother's body.
- h. h. Axis of the uterus.

position entirely above and beyond the insertion of the wall of the vagina.

As this paper is intended to be defensive rather than controversial, you will please do me the favor of extracting from my report, (a copy of which I herewith send you,) all that I have marked as relating to the subject matter in dispute, and publish it in connection with it.

I also send you for publication an outline drawing, which will aid greatly in illustrating the explanation of the cause of the fistula. I shall now leave the whole question open to Prof. Brickell, promising not to transgress further upon your valuable pages, even in reply.

The following are the extracts above referred to by Dr. Atlee.—*Eds.*

"For reasons which will be apparent in the remarks following the report of this case, I have thought proper to precede the details of the operation by extracts from a letter, written, at my solicitation, by Dr. J. C. Weatherby, of Clarksboro', N. J., giving a lucid and truthful history of the case before it came into my hands. This history is particularly valuable, as showing: 1st, that vesico-vaginal fistula may occur in females, who have previously had numerous children without any difficulty, whose pelvis are well formed and amply capacious, and whose labors are managed by skillful accoucheurs; 2d, that the injury, although coincident with parturition, may not be the effect of it, nor dependent upon any manipulation at that time; and 3d, that it really may arise from a condition not heretofore suspected of being capable of producing such a result, and that, too, prior to the commencement of labor. Dr. Weatherby writes:—

"I was called to Mrs. S. on the morning of the 2d of June, about 4 o'clock. Found her in labor. Pains moderate, os uteri dilated to the size of a half dollar, and waters discharged. A tedious case anticipated. The head was high in the pelvis. I felt no anxiety about the case. Spent an hour or two with Mr. S. down stairs. Made another examination and found the os more dilated and head lower down. Observed nothing to cause any apprehension for her safety. About 9 o'clock I found the os well dilated and the head pressing very hard on the symphysis pubis, and not disposed to come down as fast as I should have liked. Her pains

were at this time very trifling, and I gave a portion of secale cornutum. I asked when she had last voided urine. She answered that she had a short time previously, and also informed me that for some two or three days she had been troubled with partial incontinence, expressed in her own way.

"The pains now assumed a more formidable character, and in fact she complained so bitterly of them, that I gave her about two grains of opium in pill. The pill had the desired effect, but pains continued forcible, head lower and os uteri entirely over it.

"About this time, when the head was entering the inferior straight, my trouble commenced. The head seemed to be fixed permanently. Pains forcible and ineffectual. This was about 10 o'clock. Resorted to the use of forceps, the sixth or seventh time in twenty-two year's practice, and this my first failure. Sent for Dr. Clark. Tried to evacuate the bladder. Dr. Clark arrived about 1 P. M.

"After I sent for him do not think the head descended a particle. Told him she had not passed urine for two or three hours. I could find none. Suggested that he should try. He did so. Found no water. I tried to use his forceps, but they pertinaciously followed the old path of my own. He tried, and again the same direction was taken and they refused to lock. At this time he passed the female blade laterally over the head, and they were made to lock.

"The head was soon delivered. The shoulders seemed now as immovably fixed as the head had been, and not until a napkin had been placed around the neck and force almost sufficient to sever the head was used, with considerable manipulation, could the child be delivered. This was about 2 P. M.

"After I delivered the placenta some time, I again introduced the catheter, thinking that should there be any urine present, it might, with the subsequent accumulation, be a source of trouble to her before I should see her the next morning, and that certainly it would then have to be drawn by the catheter, after so hard and difficult a labor. I found no water.

"3d June, I visited her and found her a great deal more comfortable than I had expected. She said she had passed water all right. I was surprised at that, for often after deliveries not half so irritating to the parts have I had to use the catheter next day. Great tumefaction of the labiæ. Ordered rags wet with water to be constantly applied. Gave medicine to move the bowels.

" 4th. Visited her again, and found her more comfortable; tumefaction in a great measure subsided. Complained of the frequency of her stools. Gave a Dover's powder. Had passed water all right. Had pain in one leg and foot, which I ordered to be rubbed with a stimulant liniment which they had on hand and had been using on their own responsibility. She said she felt smart, to use her own expression, and had no pain or soreness, except in the leg.

" On the 5th, and for two or three days after, I watched that leg. Heard no complaint about the water till some ten days after, when I called as I was passing, and then she complained of the incontinence. This was the 14th of June. I know not how many days she had so been troubled, and supposing it might be something of the same kind she had complained of before she was confined, and that it might be a paralytic affection of the sphincter vesicæ, I ordered tincture of cantharides thirty drops three times a day. In the evening of the same day I was sent for to draw her water with the catheter. I proceeded to use the instrument, and to my astonishment and utter horror I discovered the fistula, and immediately informed her of its existence. The first time I saw Dr. Clark I told him, and he was as much astonished as myself. * * *

" I ought to have stated that such a degree of anterior obliquity of the womb I never saw before. It arose at a right angle with the line of the body just above the pubis, and to that cause I attributed the great difficulty of delivery.

" The fistula, I suppose, was produced by a slough caused by pressure of the child's head on the bones of the pubis.

" Now this I know, that neither blade of the forceps in my own or Dr. Clark's hands was in the region of the bladder, and had no need of being. The use of one blade as a vectis I did not attempt, nor never did in any case. I further believe that forceps blades, with the caution and non-forcible manner I introduce them, would not cut the bladder if they came in contact with it. If I ever should do it, I think I should know it at the time. I should think it would be the cause of great pain, yet in using the forceps no pain or hurt in that region was complained of. There was no hemorrhage at any time prior to delivery. * * *

" I do not believe that the fistula in the bladder of Mrs. S. occurred through any negligence or want of skill on the part of Dr. Clark or myself, but that it was one of those unfortunate accidents, which are not regarded so much a complica-

tion of labor as one of its sequelæ, and liable to happen in hands the most skilful."

In a subsequent letter Dr. Weatherby writes: "With reference to the position of the child's head, I believe the presentation at first was the third of Dewees, subsequently changed by my manipulation to the first. I must confess that to me obscurity attaches to that case all through. The head seemed to be jammed and immovable, even after it attained the last position. And so with the shoulders, as I mentioned in my first letter.

" My forceps are Baudelocque's with Hodge's improvement. They are the long forceps; have served my purpose well several times formerly; and I have used them about once in three hundred cases, with uniform satisfaction till the last."

A statement was also drawn up for me by C. F. Clark, M. D., of Woodbury, N. J., sustaining in every particular the above excellent history of the case.

Mrs. S. is the mother of nine children, the last one, above referred to, having been born dead. No difficulties occurred in any of the previous labors. She is a short, stout, well-built, and healthy woman, and has menstruated regularly since the birth of her last child."

" *Remarks.*—There are several points in the above case worthy of remark. This patient had passed through eight parturitions without trouble, and yet connected with the ninth pregnancy a terrible accident occurred! Can this be explained by any peculiar condition, not existing in her previous labours, or are we to censure the medical attendants for improper or clumsy manipulations? As a prosecution was talked of against one of the medical gentlemen, it will not be out of place to briefly examine this question.

At 4 o'clock A. M., June 2, 1859, Dr. J. C. Weatherby was called upon. After waiting several hours—the pains being weak and inefficient, and the os tincæ being well dilated—at 9 o'clock A. M. he stimulated the uterine fibre with ergot, and excited active labor. At 10 o'clock A. M. he attempted to use the forceps, but failed in applying them, using no improper force. He then sought the assistance of Dr. C. F. Clark, who, by making some slight lateral motion of the blades, applied the forceps, and without much force the head was delivered at two o'clock P. M., the child being dead. Now here was active labor, in a sufficiently capacious pelvis, with a favorable position of the head, continuing only

four or five hours! Every experienced accoucheur will at once conclude that the injury is too grave to be explained by so slight a cause. True, the uterus was acting, as is usual under the influence of ergot, without intermission, and the child may have fallen a victim to the delay in delivery after having established this condition of uterine contraction, yet it is scarcely conceivable that the total vitality of any portion of the female organs could be destroyed by such temporary pressure, and particularly when unaided by the employment of extraneous force. The forceps were at no time applied, excepting immediately before delivery, and as they never came in contact with the part injured, of course no injury can be attributed either to their application or their use. These inferences are corroborated by daily experience. Cases are frequently met with of very strong labor, lasting many hours, where there exists a disproportion between the size of the head and the dimensions of the pelvis, and where delivery even after ergot has been given and the forceps have been applied, is difficult and prolonged, yet no such serious consequences ensue as did in the above case. It is proper, therefore, to look for some pre-existing condition, rather than to parturition, to explain the cause of this fistula. What was that condition.

There was very great anterior obliquity of the uterus, so that its axis formed a right angle with the line of the body. This, no doubt, not only added greatly to the difficulties in the process of parturition, and in the application of the forceps, but, in my opinion, was the principal cause in the production of the fistula. The natural tendency of this position of the gravid uterus would be to elongate the vagina, and with it to drag up the bladder and curve it over the crest of the pubes. At the same time the vertex of the child's head would necessarily rest upon the crest of the pubes and be likewise firmly pressed against it by the posterior wall of the vagina and the corresponding portion of the cervix uteri being stretched tightly over the face of the child. The anterior wall of the vagina and the coats of the bladder would consequently be compressed between two hard bodies, and this compression being constant, and its force constantly increasing as pregnancy advanced, it may be readily understood how the vitality of the vesico-vaginal wall was destroyed even before parturition commenced. Now, what are the facts as recorded by Dr. Weatherby? Two or three days before parturition set in, there was incontinence of urine. Before

employing the forceps he tried to evacuate the bladder with the catheter, but found no urine. The patient had not urinated for two or three hours before Dr. Clark arrived, and yet on his arrival, both he and Dr. Weatherby introduced the catheter, and no urine was found. After the placenta was removed the catheter was again introduced, and with no better results. What became of the urine? It was not in the bladder, neither had the patient passed it in the natural way. At this very time, and for several days before, there must have been an opening between the bladder and the vagina, and it was this opening that gave egress to the urine, causing incontinence before parturition, and an empty bladder during and after it. But on June 3d and 4th the patient passed urine "all right," and no complaints were heard for three or four days after. This would seem to indicate that the vesico-vaginal walls were intact at this time. An important fact, however, is mentioned as having occurred at this period: there was great tumefaction of the labiae. This tumefaction externally must have been dependent upon swelling within the pelvis. Now, every surgeon knows that after the lateral operation for stone; the urine will flow through the cut for several hours; that then inflammation and consequently tumefaction will occur in the track of the wound, closing it up for the time, during which time the patient will pass urine "all right" through the urethra; and then, again, as the tumefaction subsides, that the urine will again escape through the wound. This is precisely what occurred in the above unfortunate case: the fistula, having been formed before parturition, allowed the urine to escape, until the inflammation and tumefaction, following a difficult labor, closed up the opening, and caused the urine, for a time, to be passed per urethram; then as the tumefaction subsided, the fistula opened, and the urine again escaped through it, causing incontinence.

This, I think, is the true and legitimate explanation of the cause of the vesico-vaginal fistula in the case above reported, and if so, it ought to be a perfect vindication of the skill and carefulness of the experienced and excellent accoucheurs who managed the case.—*American Journal of Medical Sciences, Jan. 1860.*

TRANSLATIONS.

ART. I.—TREATMENT OF DIABETES MELLITUS.

BY DR. VON MAACK,

OF KIEL.

Down to the present time the question has not even been raised how it could be that sugar, which was considered on the one side as nutritious matter—calorifacient material—and on the other a constant, normal constituent of the organism, could produce in time such pernicious effects in the organism where it had accumulated. The connection between cause and effect is not here seen. Although sugar is not a poison, but a nutritious substance, yet it manifests effects, when, by accumulation in the body, it finds an opportunity, similar to those of a poison. What influence then does sugar in diabetes exercise on the metamorphosis of tissue, that, in consequence of this changed metamorphosis, life is shaken to its very foundations and at last is not able to endure? This is the question which will occupy us now. It can be readily understood that the solution of this problem, in pathological physiology, may probably have some influence on the unsatisfactory treatment of mellituria. For it might possibly be, that, if it was first known from what side of the metamorphosis of tissue in this disease peril threatened life, we could be in position, if not to heal the disease, still to ward off properly the threatening danger and in this way to meet the vital indication. But science is now in possession of facts, which being treated inductively, without hypothesis, may lead to the solution of the problem before us; it depends upon us to combine these facts; the conclusion will flow naturally from them.

Before I bring these facts, which have been firmly fixed for a long time, before the reader, I must make a digression

in another department of physiological chemistry, to obtain a standpoint, from which every decisive fact can first receive its true light, from which they can be recognized for their entire value in the chemical life-process. I require assistance from the knowledge of the chemical skeleton of the organism. Bezold, by *this* expression, as is well known, designated the constituents of the ashes of the whole organism, and this designation serves to signify that it may be a problem with the physiological chemist to construct from the ashy remains of the organism its whole chemical life-process, just as the comparative anatomist was placed by Cuvier in a position to derive, from the bony skeleton of an animal, certain conclusions as to the remaining organs, the nervous, muscular, digestive apparatus, &c. Bezold* has discovered that in all the vertebrata examined by him, specimens being taken from the four classes (the mouse, the goldfinch, the lizard, the *bombinator*, *triton igneus* and *cristatus*, and *cyprinus auratus*) the amount of fixed alkalies (potassa and soda) in the chemical skeleton of the whole body is nearly always the same, and averages 5.5 per thousand of the weight of the body. For 1 kilogramme of a vertebrate there is employed 5.5 grammes of fixed alkalies, and it happens that the nutrition and the metamorphoses of tissue of all the mollusca (spondylozoen) is carried on with the co-operation of equal quantities of the alkalies. Further, Bezold's investigations furnished this result, entitled to the highest respect, that the relative amount of fixed alkali in the organism during the growth of an individual, both in intra and extra uterine existence neither underwent an increase or a decrease, so that the weight of the body always exhibited an equal relation to the amount of alkali.

If the relation of the quantity of mixed alkalies in the chemical skeleton to the weight of the body be so fixed and unalterable, that it, neither in the course of the development the vertebrate nor in that of the individual, undergoes

* Kölle's *Zeitschrift*, B. IX, 240-269.

the slightest deviation, then we must recognize in this relation one of the main pillars of the whole chemical life-process. But from another point of view, also, we can convince ourselves of the great importance—the absolute necessity—of the alkalies for the life-process. Bidder and Schmidt found that during fasting no chloride of sodium is excreted by the urine; the organism retains this substance absolutely necessary for its subsistence. But if, now, the alkalies are (their manner of operation on the chemical life may be what it please—the question is not here about that,) so absolutely necessary for the continuation of life, then must an interference with, a disturbance of this relation shake the lowest foundations of life; *sugar exercises such interference in diabetes mellitus*, since in diabetic urine, along with grape sugar, much larger quantities of chloride of sodium are removed from the organism than in the normal condition—quantities, indeed, far exceeding those introduced in ordinary diabetic relations. Heller, whose services, so long misapprehended in physiological chemistry, were first publicly recognized by Virchow, alleges,* on a comparison of the chemical nature of the urine in cases of diabetes, that he found the amount of chloride of sodium given off during the day increased in every case. The *minimum* of chloride was 3 per thousand in the urine. He sets forth the following calculation: A diabetic laborer, at the clinique, discharged on an average daily, for a whole year, 50 pounds (?) of urine, which, supposing the minimum of chloride contained, would remove 0.15 daily, 4.5 monthly, and 54 pounds yearly (?) of chloride of sodium alone by the urine. At first glance it is clear, that much more chloride of sodium was removed than could have been introduced by the food. The calculation is based on the supposition that only the minimum of the chloride was eliminated. Heller found, however, by direct estimation, that the quantity of chloride of sodium fluctuated between 3 and 9.4 parts per thousand,—consequently the amount of elimination of the

*Archiv für Phys. und Path. Chemie und Mikrosop. N. F. 1852. II, 420.
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chloride was greater than the calculation. But not only Heller—other investigators also have opportunely arrived at the same results, through investigations undertaken for other purposes. Thus, Rosenstein* discovered with non-azotized food, under precisely similar circumstances, that the amount of chloride of sodium contained in the urine of a healthy individual discharged in 24 hours was 23.36 grm., while in two diabetics it was 32.85 and 29.75 grms., respectively. Mosler's diabetic patient† eliminated on an average 29. grm. in 24 hours, while, according to Vogel, in the majority of healthy adults, its amount varies between 10 and 13 grms.‡ Proofs from other quarters could also be brought forward to sustain this truth; the cases cited may be sufficient. On the other hand, it is true, there are cases of diabetes, which we do not wish to conceal, where the amount of chloride of sodium in the urine is considerably diminished; and in one case the maximum of sugar and the minimum of chloride of sodium occurred at the same time (Rosenstein). But so far from these cases contradicting the law laid down, that in diabetes life is undermined by the destruction of the constant relation between the amount of alkali and the weight of the body, they really confirm it. Heller expressly remarks|| that he found this diminution of chloride of sodium in the urine only in rapid cases of acute diabetes, "which very quickly come to their end," where the organism has already been so drained of alkali, that life can no longer endure. But let us ask now: by what means—in what manner is the excretion of a substance so necessary to life as chloride of sodium *enforced* in diabetes, while in inanition, as already remarked, nature herself keeps it back, so that we can only ascribe this excessive separation of chloride of sodium so ruinous to life to its chemical affinity for grape sugar: it is well known that both crystalize easily and readily together. According

* Virchow's Archiv. B. XIII, 462-480.

† Archiv für Wis. Heil. B. III.

‡ Neubauer & Vogel's Analyse des Harns.

|| L. c. 1853, 5.

to Bernard's laws of pharmacodynamic transportation as body in its separation from the organism, carries along with it those substances with which it stands in chemical relations of affinity, and which, without this affinity, would not be separated at all, or at least not in mass.

Here is a want, unfortunately, in our knowledge of the process of diabetic disease, as regards the quantitative determination of the ashes of the different organs. We can predict, *on the basis of the analysis of the urine* with perfect certainty, that the organism of a diabetic person contains less than 5.5 parts per thousand of alkali. This deficit, however, is very differently divided among the different organs of the body. Those organs, whose functional activity in diabetes appears excessively increased, should either show no, or a much smaller deficit of alkali than those whose energy is remarkably diminished. Thus the liver being considered, on account of its excessive glycogenic action, would show most probably only a slight deficiency in alkali, whilst the deficit should certainly be more remarkable in the nervous and muscular systems, since in advanced cases of diabetes, great muscular debility is constant. What the liver first of all shows, we are now already in possession of facts to prove the above view. Folwarczny* has examined the liver of a diabetic patient with reference to the composition of its ashes. If we compare Von Bibra's analysis† of the liver of a healthy young man, who died suddenly in consequence of a fall, with that of Folwarczny, the following relations will be observed:

	Liver of Diabetic patient.	Normal Liver.
Water.....	75 375	75.489
Solid Substances.....	24 625	24.511
Organic Matter.....	23.681	23.569
Inorganic Matter.....	0.984	0.942
Soluble Salts.....	0.979	0.795 { Chlor. Sod. 0.026 Alk. Phos. 0.775
Insoluble Salts.....	0.005	0.147

* Zeitschrift der Wiener Aerzte, 1859, No. 6, 83.

† Chemische Fragmente über die Leber und Galle. 1849.

It appears from these analyses, that in the amount of water and solids, in the sum of the organic and the inorganic matters, and indeed even in the soluble salts (that is the chloride of sodium and alkaline phosphates) there is scarcely any difference existing between a diabetic and a sound liver, whence it is only to be regretted that Folwarczny did not determine separately in his analysis the amounts of the chloride of sodium and alkaline phosphates. So much the more desirable is it to demand from science, now, analyses of the ashes, which the muscular substance, the gray and white substance of the brain and other organs of diabetic patients furnish, as well as cartilaginous material, whose ashes contain large quantities of the chloride.

It is, moreover, striking that in the above analyses, the salts insoluble in water (principally the earthy phosphates) have fallen nearly $\frac{3}{4}$ of their normal amount, which it is impossible to suppose accidental. Hence it may be concluded, that in diabetes not only the chloride of sodium, but also the earthy phosphates—probably on account of the chemical affinity of sugar for the lime of the phosphate of lime—have diminished, but that in the function of the liver the earthy phosphates play a more subordinate part than the alkaline salts, and hence could be better spared. But Neubauer has already proven that the organism in diabetes excreted more of the earthy phosphates than in the healthy condition. He found that a diabetic child, in the course of nine days examination, discharged every twenty-four hours the following amounts of urine and earthy phosphates :

Daily Discharge of Urine.	Phosphates.	3CaO, PO_5	2MgO, PO_5
Mean.....2966 C. C.	1.099 grm.	0.711 grm.	0.388 grm.
Maximum.....3250 "	1.698 "	1.059 "	0.639 "
Minimum.....2320 "	0.677 "	0.436 "	0.241 "

The normal excretion of an adult, on the other hand, shows in twenty-four hours, the following :

Mean1395 C. C. 0.944 grm. 0.310 grm. 0.634 grm.

The diabetic child then excreted daily 0.155 grm. of phosphates more than the adult, whilst in the normal condition,

a child excretes much smaller quantities of earthy phosphates by the urine; and whilst in the normal condition the phosphates of lime and magnesia are excreted nearly in the proportion of 1 : 2, this proportion in diabetic urine equals 1.055, hence the supposition that in the removal of the earthy phosphates the phosphate of lime is principally concerned, is established by the analysis. At the same time we see, what a high scientific interest the quantitative analysis of the bones of diabetic patients would have, and we entertain the hope that the chemist will furnish these important desiderata at no very distant day. At present it is very clear to us that the formation of cells in the diabetic organism must be diminished, since a substance absolutely necessary for it—the phosphate of lime—is present in insufficient quantity.

But now if, as I believe, the proof is furnished, that the peril, which threatens life in diabetes, is brought about because the organism is deprived of the necessary amount of alkali, in consequence of undue separation of chloride of sodium, without the alkaline reaction of the blood being reduced, then it will nearly satisfy the vital indication, to cover up the undue loss by a large administration of alkalies, for which purpose, on account of its thirst-provoking properties, chloride of sodium is less fitted than the bicarbonate of soda, and hence the soda-cure recommended by the French has a rational basis. That the soda does not cure the disease, as has been affirmed on the basis of a false theory, is just as certain as that by its methodical employment the health of the patients, in many points of view is improved, as lately Griesinger and Oth have shown.* Here also the beneficial effects of many mineral springs, Carlsbad's fountains, the Grande Grille of Vichy, &c., on diabetes may in part at least find an explanation. But that soda, seasonably employed, will contribute to the prolongation of life in diabetes, has not yet been determined. Only for a few weeks, or at most months, has soda been used by the sick, and if no cure re-

* Archiv. für physiol. Heilkunde N. F. B. III, 1-75.

sulted, then resort has been had to other means. I have however, administered to a diabetic patient, for over three years, twice a day, a teaspoonful of bicarb. of soda, a few hours before breakfast and tea. The patient uses a very moderate, somewhat limited in quantity, mixed diet—meat every day and no sugar—is in tolerable health under this treatment; the torments of thirst and of a greedy appetite are appeased, the amount of urine has largely lessened, but it still contains much sugar. At times an increase of symptoms appear, especially when the feelings are excited, the bowels are constipated, the easily-perspiring skin becomes momentarily dry, the night's rest is disturbed by sleeplessness, &c.; but an increased dose of soda in combination with an avoidance of the causes that have brought on the exacerbation, restores the ordinary condition of health. In four years the disease has made very slow progress—the weight has only fallen from 193 to 188 pounds (both weights taken with clothing on.) A soda-cure in this way could only be obtained when the disease had not advanced too far. In a very much emaciated maiden lady, thirty-five years old, suffering from diabetes mellitus, whose daily discharge of urine varied between 3000 and 5000 C. C., the bicarbonate of soda produced no effect, death suddenly supervened after six months, amid uræmic symptoms. But on the same grounds with the administration of the soda, should the phosphate of lime be employed contemporaneously, since the diabetic organism is also by degrees deprived of this salt, although the loss is less prominent than the deficit of the alkaline salt. It must be remarked that, while on the one side in consequence of the insufficient amount of phosphate of lime, the cell-formation is checked, on the other side, by the use of, exclusively or chiefly, animal (albuminous) diet, much histogenetic material is taken into the system, which cannot be used in the formation of tissue, and hence, I say, there must accumulate in the body a mass of unconsumed albuminous material, which, in as far as it does not undergo retrogressive metamor-

phosis of tissue, and is separated again as \overline{U}_r , $\overline{\overline{U}}_r$, &c., is removed as tubercular substance unfitted for the organization, and in that way appears perilous to the organism. Whether by the administration of phosphate of lime alone *all* the conditions for the building of cells in the organism can be established, in consequence of our defective knowledge on this subject, cannot at present *a priori* be determined; experience must give her decision.

In a retrospect as to the value of the facts here adduced, we must acknowledge, that physiological chemistry is not, as many practitioners imagine, only an unprofitable conglomeration of chemical analyses, but contains the seeds of rich future harvests for Therapeutics, when physicians on the one side shall have first learned to esteem chemico-physiological material, and chemists on the other side to have satisfied the claims and answered the questions, which physicians propound.—*Archiv für Wissenschaftliche Heilkunde.*

L. H. S.

ART. II.—CLINICAL ENQUIRIES CONCERNING ERRORS IN PRACTICAL MEDICINE.

BY PROFESSOR FORGET,

OF STRASBOURG.

“*In medicina facile est per ea ipsa interdum decipi, quæ facere videntur ad vitandas deceptiones.*”—MORGAGNI*

It is related of Vernage, a skillful physician of the last century, that, in the prime of life, he abandoned practice, saying, “I am tired of guessing.” And it remains true, indeed, notwithstanding the constant improvements in the art of diagnosis, that a given case in medicine is almost always a more or less complicated problem, oftentimes an enigma not to be unravelled by every one, and occasionally

a problem altogether insoluble. So it has been justly said that the adept in practical medicine is he who makes the fewest mistakes.

Although practitioners readily admit this melancholy truth among themselves, it would never be suspected if an opinion was formed from the numerous and invariable triumphs recorded in text-books and journals, from the wondrous revelations of official and officious professors, or from the lack of charity which practitioners generally manifest in regard to their rivals, whose blunders they pitilessly condemn, forgetting that we all have need of indulgence. The trouble is that the press, the lecture-room, and the social circle are but too often theatres for display, where each actor endeavors to raise himself at the expense of his neighbors, that is of his brethren and the poor public, which gives its confidence to him who brags loudest.

It has occurred to me that a lesson or two on the errors committed and confessed by an old clinical professor, a complete and sincere revelation of such facts as are commonly carefully concealed, would certainly be a novelty, and perhaps an edifying one. Some may imagine that a feeling of vanity is not altogether foreign to such *confessions*, for there are many instances in which error itself implies a certain skill, and where the observer is right in making a mistake, if I may be excused the paradox. For in medicine as in literature, truth is often stranger than fiction (*le vrai est souvent ce qu'il y a de moins vraisemblable*.) Such was the thought that dictated the sentence of Morgagni I have chosen for an epigraph, and it is in this sense that critics have been able to say that the most skillful persons often commit the grossest blunders.

I feel impelled to trace this picture of the mistakes and perplexities of practice and of teaching by a deep and lively conviction of my duties as a professor. I have often heard young physicians complain of the altogether too lucid and too absolute principles imparted from the official sources of instruction, while deplored the deceptions, the obscurities, the stumbling-blocks of all sorts encountered in passing from

the calm and luminous atmosphere of the schools into the stormy limbo of actual practice. These murmurs were tinctured with distrust, and implied a reproach towards the teachers, and my pride has been aroused by them, and to do what I could in the way of exonerating the professional order, I have devoted a portion of my clinical course to an exposition of the difficulties the professors themselves encounter and of the errors they commit, being persuaded that their shortcomings will be more instructive than the most brilliant triumphs, by inculcating on the neophytes a prudent reserve in their future judgments, and in suggesting to practitioners some indulgence towards their brethren; for in learning of the blunders of the masters, they can scarcely fail to reflect, and to say: *Quid pures faciant, domini cùm talia patrant.* Yet the errors with which I propose to deal are not of the kind, so numerous indeed, that result from ignorance and carelessness. They are those sound legitimate errors inherent to the science, committed in its name and under its rules. The examples I shall give will explain whatever of paradox this proposition may present. Should some adepts tranquilly seated in libraries declare that I have not always adopted every precaution necessary to avoid error, I reply that it is always easy to judge after the event, and ask the one who has never been mistaken to cast the first stone at me.

Physicians do not appreciate adequately how numerous are the sources of error in practical medicine. A summary idea of them may be formed by considering the infinite variety of conditions, the complexity of elements which constitute morbid processes in general and individual cases of disease in particular. Error may arise from the patient, from the attendants, and from a multitude of exterior circumstances as well as from the physician himself. The latter deceives himself or is deceived respecting the antecedents, the moral or physical causes, the primary seat of disorder, the symptoms, progress, duration, complications, prognosis, etc.; and consequent on these mistaken premises is an erroneous treatment, so that, looking closely at the matter, we see that the

practitioner is almost always deceived about something, even in the simplest and plainest cases, a consideration calculated to make us reflect and be humble. We shall glance briefly at the principal sources of error; I say "principal," because the number is inexhaustible, and observation daily augments it.

INTERROGATION OF PATIENTS: This is surely a most fruitful source of error. Unless the practitioner be acute, the patient will almost always deceive. He deceives him through stupidity, ignorance or carelessness, as we often see among the people of the lower orders who are unintelligent and inattentive to matters relating to health. They always seem to strive to conceal the real trouble; they always assign senseless causes, and commit egregious errors concerning the dates of the invasion, the symptoms, etc. The patient deceives through prejudice, dissimulation, simulation, exaggeration, according to his material or moral interests. In the hospitals, especially, these causes of error abound, and they are common in society too. Every patient has a theory on the causes of his disease. Discreditable causes are always kept back. How often have you seen me establish conclusively the existence of a venereal disorder or of a pregnancy the patient has positively denied! Only the other day, a young man with a great mass of hemorrhoidal tumours insisted that he had no trouble about the anus. When inspection had revealed the real state of things, he excused himself on the ground that he was ashamed to admit such a disease. A woman whose genitals were studded with vegetations declared there was nothing the matter in this region. Simulation is, in all ranks of society, one of the traps against which the physician has great need to be on his guard. Exaggeration is common in others besides hypochondriacs. Patients deceive through bashfulness, through vanity, through the love of the marvellous, even through gratuitous mendacity. Rachitis and scrofulous ulcers are always the results of some accident encountered in childhood. A cicatrix, a fistulous sore has been produced by a glorious wound. Many patients

task their powers in inventing extraordinary causes, symptoms, and therapeutic effects: one has an attack of pneumonia from eating a joint of mutton, another has dejections which scorch his linen, a third experiences formidable accidents from drinking flaxseed tea. Lastly, there are patients who take a malicious pleasure in deceiving their doctor; hysterical women especially manifest this aberration. In short the patient deceives the physician in every way and on every subject. It is a Herculean labor to criticise, curtail, and rectify the interrogation, not only in cases of ignorant people, but in those of the highest social position, for the latter have oftentimes the most ridiculous notions and the most rooted prejudices on all medical subjects. Hence it is that practitioners soon throw overboard those formal protocols, those tedious formularies of interrogation laboriously drawn up by systematic writers, and trust to little beyond the simple evidence of their own senses. This is what I call *veterinary*.—*Gazette Medicale.*

G. A. O.

ART. III.—ON THE EXCRETION OF CREATINE AND CREATININE IN
HEALTH AND DISEASE.

Dr. Edward Schottin, of Dresden, has undertaken the laborious task of investigating the “Excretion of Creatine and Creatinine by the urine and effusions in the healthy and diseased conditions of the organism.” Dr. Schottin has made use of his own urine, in order to determine the normal amount of creatinine excreted. Under the use of a mixed diet the quantity excreted could be seen only with the aid of the microscope: after strictly confining himself to vegetable food for thirty hours, no trace of creatinine was perceptible; while after an almost exclusive use of animal food he detected its presence to the amount of 0.086 of a milligramme. On taking $\frac{1}{2}$ milligramme of creatine together with a vegetable diet, no creatinine was observed.

The following cases of disease were investigated with negative results.

1. Tuberculosis of the lungs; the patient was much reduced in strength; there was high fever in the evening.
2. Tuberculosis of the lungs, with the formation of cavities; no fever.
3. Tubercul. of the lungs and intestines; pleuritic exudation nine days before death. In the pleuritic and peritoneal exudations there was no creatine.
4. Granulated liver with ascites and oedema of the feet.
5. Pneumonia, fourth day of the disease.
6. Bright's degeneration of the kidneys; general dropsy without uræmic symptoms.
7. Progressive ataxy of the locomotive functions.
8. Paralysis of the arms, and weakness of the lower extremities in consequence of chronic lead poisoning.
9. Chlorosis.
10. Spinal paralysis.

The cases in which creatine and creatinine appear as pathological secretions, Schottin then divides into two classes.

The first comprises those pathological changes, in consequence of which the conversion of creatine and creatinine into bodies of a higher degree of oxydation is prevented; (as Bright's disease with symptoms of uræmia.) The second class comprises on the other hand those cases in consequence of which the creatine is primarily increased by the degeneration of the striated muscles, (as typhus.)

As belonging to the first class, twenty-three cases of uræmia were investigated; in all of them a considerable increase of creatinine was observed. There were eleven cases of Bright's disease with general dropsy; and at the various times at which they were examined, no increase of creatinine was found, and in most cases not a trace was observed.

The first series of cases furnished the following general results:

- (1.) The greater the disturbance of the secretion of the

kidneys, the greater was the accumulation of creatine in the body.

(2.) The more urgent the symptoms of uræmia, the greater was the accumulation of creatine (creatinine?) in the blood.

(3.) The greater the secretion of the serous membranes, and the greater the œdema, the smaller was the accumulation of creatine (creatinine?) in the blood, and its elimination as creatinine in the urine.

Schottin remarks further, “I have in these pages already repeatedly opposed the hypothesis of the conversion of urea in the blood into carbonate of ammonia, and of the consequent origin of uræmic symptoms. I am persuaded that the true reason of the occurrence of those symptoms is to be sought in this fact, viz: that by the obstructed secretion of urine in the kidneys the general change of tissue is arrested in the brain and other parts of the body; and I have advanced the hypothesis that a lower grade of oxydation thus determined gives rise to the uræmic symptoms. I must still maintain my supposition, and I think I shall be able to offer satisfactory proof of it by means of the foregoing results. A substance like creatinine which has such an unusually strong alkaline reaction, and decomposes even the salts of ammonia, can act only as a poison upon the organism.

Perhaps too the different observations upon the secretion of ammonia in uræmia and typhus have resulted only from the large amount of creatinine contained in the blood, in consequence of which, ammonia was set free from its combinations; a view that is the more probable, when we discover further how great an increase of creatinine takes place in the muscles and urine in typhus with or without a disturbance in the secretion of the kidneys.”

As belonging to the second class of the above-named diseases, Schottin examined twenty-two cases of abdominal typhus. The increase in the secretion of creatinine, which constantly takes place in these cases, begins generally in the middle of the second week of the disease. The quantity of creatinine in the urine rises to 0.2—0.3—0.6 of a milligramme.

The increase of the creatine contained in the muscles was also shown by Schottin. In the substance of the brain no such increase was found.

The author then notices a comprehensive pathological, anatomical and histological investigation conducted by Prof. Zenker, which has led to the result, that in abdominal typhus a very extensive degeneration of the striated muscles is found, and this causes a partial destruction of the muscular fibres. "It seems" (page 437) "that the peculiar mode of the destruction of the muscle fibres determines the increase of creatine and creatinine."

With reference to therapeutics Schottin then shows that every increased formation of creatinine, especially when complicated with disturbance in the secretion of the kidneys, or produced by this disturbance, must occasion an abnormal alkalinity in the blood, and a formation of free ammonia, as far as possible. The chief indication then, he thinks, is to oppose this alkaline condition, and he considers the use of those acids, as especially called for, which enter the blood as such, as the tannic, and phosphoric acids.—*Correspondenz Blatt des Verein für gemeinschaftliche Arbeiten.* S. C. C.

ART. IV.—TRANSMISSION OF SYPHILIS

In reply to the questions of Prof. Faye, of Christiania, (Wiener medicin. Wochenschrift, No. 11, 1860,) with regard to the transmission of syphilis from the parent to the foetus with or without mercurial treatment—Prof. Hebra communicates ten observations in that Journal, and draws from them the following inferences :

- (1.) That secondary syphilis may be communicated to the female by coitus (*a*) without any local affection of the genital parts ; and therefore (*b*) it may be communicated all the more easily when syphilitic marks are at the same time present upon the skin or mucous membrane ; (cases 2, 4.)
- (2.) That syphilis may exist in the body in a latent state,

not giving evidence of its presence by any symptom ; and may be first unmistakably shown by the syphilitic disease of the offspring ; (cases 3, 9.)

(3.) That on the other hand the opposite state of things may also exist. viz: that fathers laboring under general syphilis may (*a*) neither infect their wives nor beget syphilitic children, (cases 6, 7, 10;) (*b,*) or if the wife too should be affected with the disease, the child may nevertheless come into the world healthy, and may remain so; (case 8;) (*c,*) or if the first children should have the disease, yet those that follow may be borne without it, (case 2.)

(4.) That the symptoms of the disease must be ascribed to the lues venerea, and not to the employment of mercury ; inasmuch as cases 1, 2. 9 and 10 were never treated with mercury.

(5.) That finally the customary treatment of syphilis with mercurial agents affords no security either against the recurrence of the disease in one's own system, or against its transmission to one's children ; that this defect it has in common with every other mode of treatment, (with iodine, laxatives or other substances,) but nevertheless that syphilis in parents and in children may be cured with greater certainty, and with less danger by means of mercury, than by any other therapeutic agents. (Cases 1 to 10.)—*Correspond. Blatt des Ver. f. gem. Arb.*

S. C. C.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

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1. *The Diseases Peculiar to Women, including Displacements of the Uterus.* By HUGH L. HEDGE, M. D., Professor of Obstetrics and Diseases of Women and Children, in the University of Pennsylvania. "Nullius addictus jurare in verba magistri." With original illustrations. Philadelphia: Blanchard & Lea. 1860—469 pages octavo.

We hailed the announcement of this work with uncommon interest. It is now more than a score of years since we had the pleasure of hearing Prof. Hodge's oral discourses, but we remember full well the impression that his lectures never failed to make. His language and manner always carried with them the conviction that the lecturer was not only able and learned, but also that he was a most reliable and conscientious teacher. We remember well the uniform accuracy and purity of his language, which was pure in every sense indeed, not only as classic English, but as the modest expression of a course of instruction, which demands delicacy more than any other, and which yet, unfortunately, often gives rise to a species of coarse witticism, equally misplaced and unbecoming. Dr. Hodge felt it to be his duty to instruct his classes not to amuse them ; and he was eminently successful. Being thoroughly acquainted as we were with his high qualifications, we expected to find his work a credit to the profession in America, and a credit to medical literature at large ; and in truth, upon reading it, as we have carefully, from beginning to end, we have not been disappointed.

Prof. Hodge divides his work into three principal parts : I. DISEASES OF IRRITATION ; II. DISPLACEMENTS OF THE UTERUS ; III. DISEASES OF SEDATION ; of which three, the second part appears to us most rich in valuable knowledge. In the first part our author takes a great deal of pains to show that ner-

vous irritation is disease *per se*, fruitful of the most distressing and intractable ailments, without any necessary alliance with inflammation. If we were to find a fault with the work, we should say that the initiatory chapters, dwelling upon this subject are rather prolix. That the positions taken by the learned author are essentially right, we admit without hesitation, but we think they might have been offered, and sustained, with some abbreviation. The medical reader of the present day wishes to be brought *ad rem*, without dwelling upon matters upon which very brief argument suffices. No one can write more tersely than Dr. Hodge, and none writes generally more to the purpose ; indeed, it is a marked merit in his writings, that he offers nothing redundant nor irrelevant, except it be some little redundancy in the chapters we refer to. After passing through them, however, the interest increases with every page, and one makes to himself the acknowledgment that he is taking lessons from a master. Dr. Hodge is not a copier, nor compiler ; he speaks from close observation, profound reflection and mature experience. He knows how to value the writings of others ; he weighs them in a just balance, and fairly estimates them at what they are worth. But he draws his supplies principally from his own store-houses.

"I have no desire," he says, "either to present a summary of the labors of others, or to give a critical review of their opinions and practice. My only object is to record, while incidentally alluding to what others have advanced, my own opinions and practice, the result mainly of clinical observations made during a laborious practice of many years, nearly thirty of which have been spent as a public teacher of Obstetrics and Diseases of Women and Children. My success in the treatment of these diseases has been so encouraging, that I cannot but hope a mite may thus be contributed to the scientific character and practical utility of our beloved profession."

We will say, at once, that the work fulfills its object capitally well ; and we will moreover venture the assertion that it will inaugurate an improved practice throughout this

whole country. The secrets of the author's success are so clearly revealed that the attentive student cannot fail to insure a goodly portion of similar success in his own practice.

A few extracts from the work will give the reader an idea of the author's style, as well as of his doctrines. "One great object of the present work is to maintain that, in many cases, the independence of nervous diseases is complete; and also that when complications exist, demanding therapeutical assistance, the neurotic affection is often of primary and essential importance, and demands the chief attention of the practitioner."

The doctor properly rebukes that spirit, in and out of the profession, which makes light of the nervous diseases of females, as, although they do not often threaten life, they are yet quite adequate to make life miserable. They frequently depend upon causes that are appreciable and susceptible of relief. It is the duty of the practitioner to search for the causes in all cases, and to use the most available remedies, moral or material, or both, to relieve them. There is a vast deal of suffering when there is no inflammation, and the practitioner is sadly at fault, with whom all uterine, and kindred diseases, are either inflammatory or imaginary.

Our author, in common with all other reflecting men, is troubled by the vague manner in which terms are used in the medical profession. The same vagueness perhaps attends upon all abstruse knowledge; in medical science it undoubtedly gives origin to great confusion of ideas.

"The word *irritation*," says the doctor, "is almost constantly employed, and yet very seldom in a definite sense, or with any precise meaning. All this is in a great degree unavoidable from the imperfection of our knowledge, as well as from the paucity of language. Hence, in order that I may be better understood, I will point out the meanings that will be attached to the technical words employed.

"By the irritability of tissues, is simply meant a capability of receiving impressions from surrounding agents, and thus producing phenomena, and is only to be observed when these tissues are alive. It is the 'capability of being acted

upon.' It, of course, belongs to every thing that has life; to plants as well as to animals; to the molecular cell as truly as to the most complicated and perfect structure."

We do not know that this definition can be considered strictly satisfactory. Tissues, as all other matter, may be acted upon with certain resulting phenomena, whether they have life or not. All matter is surely "capable of being acted upon." But only living matter is capable of *vital* responsive action to the impressions made by irritants, stimulants or excitants. The word *vital*, we think, cannot well be spared from such a definition, without an amount of circumlocution, which after all, is less expressive.

Passing from general to special considerations, Dr. Hodge takes up the subject of IRRITABLE UTERUS, and we recommend this subject, as treated of by him, earnestly to the reader's attention. "What idea," he says, "is to be associated with the expression 'an irritable uterus?' No other than that the organ is more sensitive—more easily excited—than when in a healthy state. It is no longer in a normal condition, but in an abnormal, unhealthy, diseased state. This diseased condition has reference, let it be observed, not to its circulatory system, and, of course, not to its organic life, but to its nervous system, its animal life. It is a state not of organic irritation, but of nervous irritation. In simple, uncomplicated cases, the alteration of the sensibility is the only indication of its existence."

This is a very grave affection in which inflammation may only appear as a complication. Mr. Brodie and Sir Astley Cooper very justly gave currency to terms expressive of irritative, in contradistinction to inflammatory diseases.

"To Dr. Gooch, however, we are chiefly indebted for the exact definition of this word (irritation) and its application to uterine pathology, in his most admirable essay on 'Irritable Uterus.' He designates it as a 'painful and tender state of this organ—neither attended by, nor tending to produce change in its structure.' In some cases after the lapse of ten years of suffering, no alteration of structure could be de-

tected by him. The disease, he says, is very obstinate, and very slightly under the influence of remedial agents; but nevertheless, in time, patients often perfectly recover, although relapses are very apt to occur from the slightest cause. Dr. Dewees, of this University, deserves notice, in this connection, as having fixed the attention of the American profession on this complaint in an excellent essay; although he, like most pathologists, wandered from the simple idea of an irritable, to that of an inflamed organ. He unfortunately intimates that it is analagous to a 'sort of inflammatory state:' and still more unfortunately, both he and Dr. Gooch, and indeed nearly all physicians, have practically, if not theoretically, adhered to the same idea; pursuing more or less decidedly, the antiphlogistic treatment, in opposition to that which experience, as well as a more correct pathology would indicate."

Dr. Hodge shows conclusively, by argument and by cases, that irritable uterus is more amenable to treatment than is generally supposed; but the theoretic and practical error of confounding irritation with inflammation must be abandoned to obtain satisfactory results.

The diseases, or morbid phenomena, which take their origin from irritable uterus as a centre, are almost incredibly variable. "*Propter uterum solum mulier est id quod est.*" The late Dr. Frick once told us that there had been some difference of opinion between himself, as medical examiner in this city for a London Life Insurance Company, and the consulting surgeon of the company at home. An agent of this company brought a letter implying rebuke to Dr. Frick from the London surgeon. Our townsman, somewhat offended, remarked that the London examiner was himself in fault, and he expressed some surprise that he should be retained by the company. "Ah! doctor," said the agent, "that has been the subject of a great deal of trouble with us. We at one time employed Dr. —, (famous in the speciality of heart diseases,) and he would scarcely pass a subject on account of some morbid sounds or signs about the heart. Then we employed Dr. —, (famous in urinary diseases,) who found nearly all applicants afflicted with present or

prospective disease of the kidneys! These gentlemen, between them, would soon have closed our office.” The physician extensively engaged in female practice will almost learn to attribute all diseases of women to morbid conditions of the uterus; as these specialists found, in all cases, the heart or kidneys at fault. The womb is certainly a great perturber of the general system. Its disorders cause many real and many spurious maladies. We call attention to the following paragraph, as bringing home something very familiar to all practitioners. We transcribe it from among many other “general symptoms of irritable uterus.”

“*Hyperesthesia of the Skin.*—Neuralgic suffering is often manifested by great soreness of the skin, so that the least touch or pressure is often intolerable. When the skin of the abdomen is involved, this soreness gives rise to the suspicion of peritonitis; and when it is over the hypochondria, to inflammatory affections of the liver, stomach or spleen. When over the chest, diseases of the heart are often suspected. When in the extremities, it confirms the ideas of rheumatism and gout. Such soreness of the cutaneous tissue over the spinal column has given origin, too frequently, to ideas of vascular engorgements and inflammations of the spinal cord, and its membranes at these spots.”

Something more than a year ago, a young friend and patient of ours, took unto himself a wife, a nervous, impossibly girl, who, with the rest of her family, was a believer in homœopathy. Our friend was disposed to make us his family physician; but he said his wife had good cause to be pleased with her homœopathic adviser, as he had cured her of several severe attacks of peritonitis. Before many months she had another attack of “peritonitis,” and she was entrusted to our care. The slightest touch over the surface of the abdomen made her cry out with pain, but there was no fever, and no general disturbance of the system to create alarm. Having previously cured precisely such cases by restoring the womb to its proper position, we gave this lady a placebo, with every assurance of an early, if not an immediate cure. We assured her husband that she had no

peritonitis, but that she was suffering with a condition of the womb which would soon find spontaneous relief, in the natural order. In fact, the womb soon rose above the pelvis, and in due time, the lady became a mother, since which we have heard nothing more of the supposed peritonitis.

We will take another paragraph, on the *heart*, from under the heading of "*Reflex Influences of Irritable Uterus*," which will recall to the reader the observations of his daily experience.

"*Heart*.—Disturbances of the action of the heart from various moral causes, as fear, joy, anxiety of mind, &c., are familiar to every one, especially as occurring among women. Irritations, or excitements of the brain, from physical as well as moral causes, affect the functions of the heart. This is very frequently exemplified in all the varieties of uterine irritation, and occurs probably through the spinal and cerebral systems. In cases of irritable uterus, the morbid functions in the cardiac region are exceedingly diversified, and rapidly alternating. The heart for hours or days may give no disturbance; and then suddenly, the slightest cause, it may be, will excite the most distressing affections. Patients continually allude to a fluttering and irregular action of the heart, to palpitations which are sometimes very violent, with a sense of suffocation, of fullness, or of distension, as if rupture must occur. Hence, there are great secondary disturbances of the brain and nervous system from anxiety of mind, and dread of speedy dissolution. Many become alarmed under an idea of the heart being misplaced, thrown from one side of the chest to the other, while others insist that the action of the heart, at times, entirely ceases. In most of these cases, the practitioner may have positive evidence of cardiac agitation, by placing his hand on the chest, or by auscultation, when the palpitations and irregular actions are distinctly felt and heard. Very little, however, can be learned from the pulse at the wrist, which is often perfectly quiet, soft and regular, under these nervous disturbances of the central organ of the circulation. Sometimes it is cored, quick, and irritable, perhaps from the general disturbance of the nervous system, as well as from the action of the heart. The diagnosis, by auscultation, even between these functional and nervous cardiac excitements and the indication of structural disease, is not always very easy. I have known a

number of cases where even experienced auscultators have believed that organic disease existed, but the subsequent result did not justify the opinion. When these irregular actions are combined with neuralgic pains in the tissues of the chest, physicians, as well as patients, have apprehended acute inflammatory affections of the heart, or of its external or internal membranes. The distinction between carditis, pericarditis, or endocarditis, and mere nervous disturbance of the heart, is not always easily drawn."

We advise the young practitioner to revise this paragraph so as to get the substance of it thoroughly impressed upon his mind. His clinical experience will confirm its truth and justice.

Every page of Dr. Hodge's work would supply a passage suitable for quotation, but for want of time and space, we can only now make passing references to certain points of the highest importance. Dr. Hodge deprecates, as we have previously intimated, the heroic antiphlogistic practice, so common in irritable uterus. The bleedings, general and local, cauteries, caustic applications, blisters, &c. &c., so much in use, are demanded but in comparatively few cases. They are useful sometimes, in complications, but as the general rule, their tendency is to aggravate rather than to cure the disease. Proper hygienic measures, with, if necessary, a suitable support for the uterus, will accomplish in most cases the desired object. True ulcers are much less common in his experience, than the works of many writers would lead us to suppose; and where they do exist, the mildest treatment generally is most successful. Many of the most harassing and exhausting affections result from simple displacements of the uterus, with irritability. A well devised correction of the displacement will relieve all the symptoms. Thus, menorrhagia is frequently cured by a proper application of a proper form of pessary. The use of this instrument is, in its place, fully and elaborately discussed.

The profession is already well acquainted with Prof. Hodge's lever pessary, in both forms, open and closed.

We have found it in our own practice an invaluable instrument. In one instance, a lady had been suffering for many years from prolapsus uteri, attended with great irritability, with a most distressing traction upon the bladder, a morbid vascularity at the orifice of the urethra, and so much general disturbance of the system that life was but a prolonged burden to her, when we resorted to Dr. Hodge's open lever pessary with the happiest results. A few light touches of nitrate of silver relieved the vascular tumor at the urethral orifice while the womb was thus supported; and in short, in a reasonable time, she was enabled to attend to her household duties and to ride and walk in the open air, from which she had been so long debarred. The improvement in her health has been permanent.

Dr. Hodge is a most strenuous advocate of the use of pessaries, while he not only admits, but shows, that indiscreetly used, they may be, and are, productive of much mischief. Two points are essential to their salutary use, to wit: the instrument must be of the form best adapted to the case, and it must be properly applied. The application in every instance requires care, thought, and prudence, on the part of the practitioner; if he brings these to his aid, he will find himself enabled not only to relieve many formidable cases, but actually to cure cases often considered incurable. The careless practice of giving pessaries to patients to apply themselves, is worse than useless. An experienced patient may sometimes indeed, readjust an instrument to promote its efficiency, or her own comfort, but the physician must first have selected it, placed it *in situ*, and ascertained by observation that it is adequately accomplishing its ends.

We are glad to find that Dr. Hodge does not approve of Simpson's intra-uterine pessary, the mechanical ingenuity of which is more than counterbalanced by its capability of doing mischief to the vital tissues with which it comes in contact.

There is but one more subject to which we will invite attention, and that is, the supports of the uterus, as under-

stood by Dr. Hodge. Most modern writers teach that the uterus is supported principally by the vagina—or as Dr. Churchill expresses it in a few words—"Formerly the support of the uterus in its proper position was mainly attributed to the uterine ligaments, &c., but a more correct estimate has shown that these have but a limited influence, and that the real support is from below, depending upon the tone of the vagina and the soft tissues which close the outlet. Any change here is immediately felt, and will form a chief element in the production of displacements."—(Diseases of Women, edited by Dr. Condie, chap. xxi.)

Dr. Hodge maintains that what was "formerly" held, is now, as then, the true view. "What are the natural supports of the uterus? * * * * There can hardly be a doubt but that the proper position is maintained chiefly by the ligaments, as will be hereafter shown; although these have by many been deemed insufficient. The idea that the *vagina* is the chief support of the uterus has been, and is still maintained. To contract, strengthen, or diminish the size of the vagina, even by surgical operations, has even been regarded as an important means in the treatment of displacements of the uterus. All this is contrary to just theory and positive experience." * * * *

"**LIGAMENTS.**—That the uterus is maintained *in situ naturali* by its ligaments, assisted by several accessories, will probably be acknowledged, if careful attention be paid at once to the oblique position of the organ and the modus operandi of these supports."

When Dr. Hodge promises to "show hereafter" the soundness of his views, the reader may rest assured that "the word of promise" will be amply fulfilled; for the arguments and illustrations, we must refer to the work itself.

The book is in all respects well gotten up, and the "original illustrations" are most valuable. We do not think it necessary to commend this work because it is "American;" or to say that no medical library can be complete without it;

but we will reassert that it is a credit to *all* medical literature ; and we add that the physician who does not place it in his library, and who does not faithfully con its pages, will lose a vast deal of knowledge, that would be most useful to himself, and beneficial to his patients. *It is a practical work of the highest order of merit*; and it will take rank as such immediately.

Our author appears to have been led to write his work in compliance with the request of many of his former pupils, which was supported by an invitation from Prof. Meigs to the same purpose ; and, by the way, we commend the amicable relations between these two distinguished gentlemen, who by position and pursuits are engaged in an honorable rivalry, as an example to all other members of the profession. Dr. Hodge in a letter to Dr. Meigs, published with the book, uses the following language :

“ You politely urged me to make a ‘ *sign* ’ for posterity ; I have at last ventured to make one—in the form of the work now sent to you.”

The able professor in the Jefferson school, will undoubtedly admit, with us, that the *sign* and the *work* fulfill the highest expectations, and are worthy of a place among the most valued archives of medical science. Little time is left to a physician in large practice to transmit the precious fruits of his experience to posterity by writing ; but that little time, well used, brings to him honorable fame, while it enlightens and encourages those who have to follow in the same field of labor.

“ _____ Breve et irreparabile tempus,
“ Omnis est vita; sed famam extendere factis,
“ Hoc virtutis opus.”

R. McS.

II. *The Surgical Diseases of Children.* By J. COOPER FORSTER, Fellow of the Royal College of Surgeons, Assistant Surgeon to and Lecturer on Anatomy at Guy's Hospital, Surgeon to the Royal Infirmary for Children, &c. London: J. W. Parker & Son. 1860—8vo. pp. 348.

Works devoted to the surgical diseases of children are rare. Indeed, the English language does not possess a complete treatise on the subject, and save the little book of Mr. Forster, the title of which we have placed at the head of this article, we would not know where to turn for any work specially intended as a guide to the treatment of even a majority of the surgical diseases to which the child is subject.

The same objection is equally applicable to the medical literature of both France and Germany—a literature so prolific in works treating of the strictly medical affections of children, as to give it a decided character. If monographs, such as those of Rilliet and Barthez, Legendre, Billard and Bouchut, in France; Bednar and Hemrig, to say nothing of the “*Journal für Kinderkrankheiten,*” in Germany; Underwood, Evanson and Maunsel and West in England, and Condie, Meigs and Stewart in the United States, are necessary, it is certain, that the surgical diseases of children have been neglected to an unpardonable extent, and it is time that some one with the experience and good sense of Mr. Forster should turn his attention to the important duty of pointing out the peculiarities in pathology which surgical diseases assume, and the modifications of treatment they require, when the younger portion of the human family are unfortunately their subjects. We, therefore, before proceeding to criticise his labors, thank him for the interest he has taken in this subject—an interest which we are sure will be appreciated by those of his brethren who less fortunate than himself in having hospital advantages for the study of the interesting class of diseases under consideration, must pick up by degrees, and at every disadvantage, the knowledge which they feel they require. We shall not therefore apolo-

gize for entering somewhat at length into the consideration of the volume before us, for we are confident that the importance and newness of the subject will commend it to the attention of our readers.

In the introduction, among other matters, the employment of anaesthetics is considered. The use of freezing mixtures after the method recommended by Dr. Arnott, for producing insensibility, is, we think very properly condemned as not being applicable to young children. Chloroform is according to Mr. Forster always to be preferred, and he uses it in every case where it is desirable to induce anaesthesia.

The following extract expresses his views in a very unequivocal manner :

“Any one who remembers the operations conducted years ago before chloroform was known, cannot fail to be impressed with the great facilities which that agent gives to the operator, and its immense benefit to the patient. Indeed it appears to me that under present circumstances we are never justified in inflicting any severe pain upon children. Chloroform is so safe in the case of the young child, that I never perform even the slightest operation without using it, with the one exception of excising the tonsils. In this case I think it advisable not to incur the risk of bleeding into the larynx, and fortunately the sensibility of these organs is very small. I believe that as children advance in years the danger of chloroform increases, but among the thousands of cases in which it has been employed in early life I have heard of but very few fatal results from its direct effects—as children advance towards puberty freezing mixtures may be had recourse to in suitable cases, but in the very young I never employ them. The pain connected with their application seems to be hardly less than that of the operation they are designed to mitigate.”

We believe the correctness of these opinions will be admitted by all who have had occasion to employ chloroform with young children. The rapidity with which anaesthesia is induced, and the certainty and celerity with which consciousness is regained are undeniably well-marked, and in our experience we have never seen any untoward result from the employment of chloroform in the class of patients under notice.

Some excellent remarks on *Diseases and Injuries of the Head* follow, and though Mr. Forster alludes to the fact that spontaneous epistaxis is frequently beneficial in relieving the symptoms induced by concussion—he denies that the same fortunate event is consecutive on artificial blood-letting. He cites a case in evidence of the first statement and then says :

" The question naturally arises : can we artificially obtain the same benefit by the abstraction of blood from the arm or temples ? I should unhesitatingly answer, no. During my first years of practice, bleeding from the jugular vein or temporal artery was almost universal in the earlier stages of concussion. The results were unequivocally disastrous. And when it is remembered how ill, children under all circumstances, bear the abstraction of blood, this is not to be wondered at. It should never be forgotten that these tender plants require all their sap for the nutrition of their tissues, in towns especially."

The second chapter embraces the consideration of *Diseases and Injuries of the Face*, and the several affections and accidents to which this important part of the body is liable, are clearly and satisfactorily dwelt upon. Epistaxis, Mr. Forster regards as a trifling circumstance. It is doubtless true that in the great majority of cases it is unattended with serious results, but we have on more than one occasion seen very alarming symptoms accompany the unchecked flow of blood from the nostrils. In one case it was necessary to plug the posterior nares after the various household remedies and astringent applications had been employed in vain. The little patient fainted from the excessive loss of blood, and it was several days before she had rallied sufficiently to leave her bed. In another case which several years since came under our notice, convulsions supervened on excessive nasal hemorrhage, which was finally checked by alum insufflations. The hypothesis advanced by Mr. Forster that the discharge in the epistaxis of children is not blood, " but an altered and diluted fluid " is only an hypothesis, and we must say, one which is not very creditable to his physiological acumen.

In this chapter we also have a full account of that terrible affection *cancrum oris*, and its intimate association with the indiscriminate use of mercurial preparations is strongly insisted on. Mr. Forster believes that the action of the mercury is mainly exercised by actual contact, from the retention of portions of powders containing some form of this substance in the mouth of young children. His supposition is perhaps rational, but before it can be admitted, more direct evidence than any adduced by our author must be submitted.

In regard to the treatment, Mr. Forster has nothing very encouraging to offer, true *cancrum oris* being in his opinion nearly always fatal. He recommends the application of strong nitric acid (the child being placed under the influence of chloroform) until the gangrene is arrested. Lint dipped in a solution of the chlorinated soda should also be kept constantly on the gangrenous part and at the same time the strength of the patient must be supported by tonics and an unlimited supply of wine. Chlorate of Potash has never produced any benefit in his hands, and we doubt if it ever has in those of any one else, caused the least arrest of the frightful progress of this disease.

The third chapter is devoted to the consideration of *Diseases of the Mouth and Tonsils*. In hare-lip Mr. Forster, with the generality of surgeons of the present day, prefers to operate as soon as possible after birth—immediately if practicable.

The object of this is to obviate, at an early period the difficulty which a child with hare-lip experiences in sucking, and there is no doubt that the per centage of deaths is very materially lessened by this procedure. In the following case the death of the patient was probably due to deficient nourishment :

"J. W., aged six weeks, was admitted into Guy's Hospital July, 1854, to be operated on for hare-lip. Like many of this class, it had been unable to suck efficiently, and was becoming emaciated. The usual operation was performed on August 9th. There was no excessive loss of blood, but the child died the next day with convulsions and diarrhoea."

Aside from the inelegancies and inaccuracies of language, this case is sufficiently instructive.

Mr. Forster discards entirely the use of pins as aids to keeping the parts in exact apposition. After the edges of the fissure have been pared, he keeps them in contact by means of the common continued suture—the needle being first inserted near the lower margin, and the sutures being then carried upwards. He objects to the pins on the ground that they leave scars at their points of entrance and exit. This is certainly not always the case, and we should think the event in question equally liable to ensue on the plan he follows. In two cases of hare-lip which came under our notice, not long since, instead of using thread or silk to wind around the pins, we employed sections of small India-rubber tubing, which answered the purpose admirably.

In regard to *Ranula* we are glad to see that Mr. Forster adopts the correct view of the pathology of the disease, which is adverse to the old idea that it is due to obstruction of the submaxillary or sublingual ducts. *Ranula* is dependent upon obstructions of mucous follicles under the tongue, and corresponds with the cysts which are frequently met with in other parts of the mouth. Bernard has for some time objected to the more generally received view, and we have had several opportunities of confirming the accuracy of his statement.

In *Enlargement of the Tonsils*, Mr. Forster's experience is not favorable to local applications. Occasionally he has seen the engorgement disappear in great part under the use of iron, change of air, exercise and sea-bathing, but in the great majority of cases the only efficacious treatment consists in excision. In performing this operation he prefers the guillotine, and certainly in children, where, owing to their struggles, the surgeon is liable to be embarrassed, he is right in his preference. In adults we have always found the operation more efficiently performed with a vulsellum and a sharp bistoury.

The fourth chapter relates to *Affections of the Larynx*

and Trachea, and the fifth to *Affections of the Pharynx and Esophagus*. Both these chapters contain a great deal of valuable information, and several extremely interesting cases are given. We regret that our limits prevent us dwelling upon these portions of Mr. Forster's volume.

The next chapter treats of *Diseases of the Rectum*. We find nothing under this head worthy of special mention. In the seventh chapter *Affections of the Trunk* are considered. Under this class Mr. Forster includes diseases of the neck, diseases of the umbilicus, and diseases of the vertebræ. Under the second of these heads he treats of *Growth from the Umbilicus*—not a very exact designation we must confess. However, by this name, Mr. Forster refers to a polypoid mass which appears at first like a granulation of unusual size, but which may attain a length of three-quarters of an inch. In these cases it is a pendulous excrescence, resembling a portion of the cord. It is of red color, and pours forth a constant purulent secretion—occasionally hemorrhage takes place. It is unaccompanied by pain or other inconvenience.

We think Mr. Forster does not clearly understand the exact nature of the disease which he has described so accurately. It is not polypoid, but is simply a collection of exuberant granulations, arising after division of the cord, covered by a pyogenic membrane. We have several times met with cases of the kind. The growth may be removed by the ligature as recommended by Mr. Forster, or it may be snipped off with a pair of scissors, or a bistoury, the bleeding surface being then cauterized with nitrate of silver. The latter plan we have found preferable to the former, as being less tedious, and equally efficacious. The lithograph which accompanies the remarks on the affection is far from presenting a characteristic representation of the growth.

The apparatus devised by Mr. Bigg to support the head in the treatment of curvature of the spine, is figured, and is, we think, among the best of the many appliances used for this purpose.

The eighth, ninth, tenth and eleventh chapters are devoted

to the consideration of the *Diseases of the Urinary and Generative Organs*. With Mr. Forster, we believe that "the importance of the diseases of these organs, in both sexes, can scarcely be exaggerated," and we must express our satisfaction with the admirable manner in which he has treated the whole subject. To have said less than he has, would have left this department incomplete, and yet he could not have dwelt upon it at greater length without weakening the general force of his remarks. We can only select from this portion of his work a few subjects for special consideration, referring our readers to the volume in question for the more ample details which Mr. Forster's experience enables him to furnish.

With reference to discharges from the vagina in children, Mr. Forster makes the following remarks, the good sense of which will, we think, be admitted by all capable of forming a competent judgment on the subject.

"That such a disease as true *Gonorrhœa*, communicated by the foul contact of some person affected with that disease does occasionally occur in young girls of four years old and upwards, cannot be denied. But to distinguish it by any pathognomonic symptoms from some cases of infantile leucorrhœa, is, I am bound to maintain, an impossibility. All practitioners are aware that it is the almost universal custom of mothers and nurses among the poor, to attribute all cases of discharge in young girls to some other cause. Generally they come mysteriously, whispering—the child has been dandled on some one's knee, or there is a young man lodging in the house whose linen is foul. As a rule, not the slightest importance is to be attached to such statements. Infantile leucorrhœa is not a rare disease, and it is highly desirable that the minds of women should be disabused of this kind of prejudice. It is certain that only circumstantial evidence of the most unequivocal kind can lay any basis at all for the imputation. No stress is to be laid upon the symptoms, unless there are evident marks of violence. How is it, we may ask, that in almost all cases in which such assaults are suspected, the disease communicated is gonorrhœa and not syphilis?

"During the whole course of my experience I have met with only one case in which syphilis was communicated to children. The patients were two sisters, aged respectively

eleven and twelve, and the young man confessed his crime. This rarity of syphilis appears to me to be a very strong point in this case. In regard to the statements made by the children themselves, very little reliance can be placed on them. They are frequently tutored, more frequently still are cross-questioned, till at last they believe what they have so often heard; perhaps, most frequently of all, the unaccountable spirit of lying which seems often to infest the infant mind—it may be as the result of dreams—is the entire origin of the tale.” * * *

In treating the gonorrhœa of children the mildest measures are sufficient. Soothing fomentations and weak astringent injections being all that are necessary.

In his remarks upon *Incontinence of Urine*, Mr. Forster has nothing satisfactory to offer so far as the treatment is concerned. He seems to be entirely unaware of the good effects which follow the use of belladonna in this distressing affection and which were so ably brought before the profession by Dr. Addinell Hewson, of Philadelphia, in a paper read before the College of Physicians, and published in the American Journal of the Medical Sciences for October, 1858. The remedy in question is merely mentioned with a negative recommendation. We have several times used the belladonna as recommended by Dr. Hewson, and have always found it perfectly effectual.

The several other diseases to which the urinary and genital organs of children are liable, are well discussed, and the views enforced, are such as will receive the acceptance of most surgeons of the present day.

The twelfth chapter treats of *Hernia*, and the thirteenth and fourteenth of *Nævus*.

In the treatment of the latter affection, the various methods are detailed and preference given to the operation with the ligature. Mr. Forster appears to be ignorant of the plan recommended and successfully used by Dr. Brainard, which consists in the repeated application of collodion to the vascular growth, which by its contraction on evaporation exerts a constant constringing action on the vessels which enter into

the abnormal structure. We have twice had occasion to make use of this method, and in both cases succeeded in effecting a cure. In one of these the growth was situated in the skin of the cheek and was about the size of a marble. It was completely gone at the end of the fifth week. The other was a larger growth, situated in a more favorable location for the action of the collodion, being placed over the left frontal eminence. This was entirely cured in three weeks. We are not certain that in very large nævi Dr. Brainard's plan would be applicable, but in those which do not exceed in size a walnut, we are sure it is decidedly of great value.

The fifteenth and sixteenth chapters are devoted to the consideration of *Injuries and Diseases of the Bones and Joints*. Mr. Forster's remarks on hip joint disease are unusually short. He recommends rest, the straight splint and tonics, stimulants, &c. He is unaware of the advantages which Prof. Smith's anterior splint affords for the favorable management of this generally intractable affection.

The seventeenth chapter treats of *Diseases of the Skin*, and the eighteenth chapter of *Diseases of the Ear*.

In the nineteenth chapter we have quite a full account of *Congenital Deformities and Malformations*. Mr. Forster is, we think, somewhat unreasonably opposed to the treatment of spina bifida with injections of iedine. He has evidently had little or no experience with this method.

In the twentieth and last chapter, *Tetanus, and Scalds and Burns* are considered. We find nothing worthy of particular comment in this chapter.

The volume is well printed, and is illustrated with a number of wood cuts and several colored lithographs, which add much to the value of the work.

In conclusion, we can only repeat what we have said at the commencement of this review, that Mr. Forster has conferred a benefit upon the profession by writing this work, and we trust that ere long it may be in the hands of all those who have to deal with the surgical diseases of children. There are several minor faults in the composition and general

style of the work which we have not stopped to notice, as they do not essentially detract from the value of the matter, which is the result of Mr. Forster's extensive reading and experience.

W. A. H.

III. *A Practical Treatise on the Diseases of the Lungs, including the Principles of Physical Diagnosis.* By W. H. WALSH, M. D. A new American from the third revised and much enlarged English edition. Philadelphia: Blanchard & Lea. 8vo.—pp. 458.

The previous editions of Dr. Walshe's work had acquired for it the enviable position, of being generally acknowledged as high authority in regard to the class of diseases, of which it treats. As originally published, it was but little more than a manual of physical signs. The edition of 1851 was a duodecimo of three hundred and eighty pages, whereas the one before us is a large sized octavo of four hundred and fifty-eight pages, handsomely printed and constituting a voluminous and complete treatise on the diseases of the respiratory organs. We find so much new matter in it, that we feel it is deserving of more than the passing bibliographical notice we are in the habit of giving to new editions. No one can examine it without being struck with its thoroughness, for nearly all points of interest, connected with pulmonary diseases, are touched upon. The views of others are discussed and weighed, generally with impartiality, and modern experiments and discoveries are given and fairly estimated by an able clinical teacher, and by one who has for years proved himself a faithful worker in the rich mine opened by Lænnec.

The extraordinary talent and success of Lænnec, in following up, and, we had almost said, in completing his discovery is universally acknowledged with gratitude. To insert and start the wedge of discovery in prizing open the secrets of the natural sciences, as well as those of the human economy,

is as much, ordinarily, as has been accomplished by one man. But no one can now read the original treatise* of the father of auscultation and compare it with the more recent works, without being impressed with his genius, and with his indefatigable industry in accumulating an immense number of facts. All must acknowledge the surprising accuracy of his views of the pathological signification of the more salient points in auscultation—Dr. Stokes† has well described it, as “a gift of science to a favored son: not, as was formerly supposed, a means of merely forming a useless diagnosis in incurable disease, but one by which the ear is converted into the eye; the hidden recesses of visceral disease opened to the view; a new guide in the treatment, and a new help in the early detection, prevention and cure of the most widely-spread diseases which afflict mankind.” It was impossible for one man, no matter how brilliant his genius, or how untiring his working capacity, to complete the exploration of such a field. For many years, the French school in particular, considered it almost sacrilege to touch, much less to modify or “think anew” the doctrines of the immortal discoverer of auscultation. If there are any who still think so, we refer them to this work, or to those of Skoda, Weber, Swett or Flint. They will be convinced, that he was too positive as to the pathognomonic signification of many of the auscultatory phenomena, and that there were many points which he entirely overlooked, they being overshadowed by the more prominent features of ordinary respiratory diseases. The perusal of this new edition will show them that, like all other sciences, that of auscultation, perhaps the most certain of those connected with medicine, is necessarily progressive. The laws of acoustics are shown to be much more influenced by the modifying conditions of structure &c. of the respiratory organs, than was formerly supposed.

We must express our gratification that since his previous edition, Dr. Walshe has examined into the views of the Ger-

**Traité d'auscultation médiate*, Paris 1819.

†*Diseases of the Chest*.

man school of Skoda* and Weber,† and that he does not persist in his uncompromising rejection of them. He shared in the prejudices of his countrymen against, what were considered their revolutionary and theoretical views, and was unwilling to give them a hearing. Now he has done so, and he has, as we shall presently see, not only modified his former expressions in regard to them, but has in some instances, after careful researches, arrived at their conclusions.

There are three grand divisions of this work : part first, being devoted to the physical examination of the lungs and appendages ; part second, to diseases of the lungs and appendages ; part third, is the appendix, treating principally of the effect of change of climate on tubercular diseases.

Our author announces in the advertisement, that he has made the attempt to establish the practice of percussion on a new and a truer and a more clinically useful system than that hitherto adopted.

In the chapter on Inspection of the Chest, the observer's attention is drawn to the difference between the expansion and the elevation movement and the importance of the cause of modification of each of these, he does not exaggerate.

We have a clear and satisfactory analysis of Hutchinson's, Pepper's and Kentish's observations as to the capacity for air of the chest. His conclusion in regard to the value of the spirometer is probably correct, for he says :

" The Spirometer indicates when the lungs receive an insufficient supply of air, but gives no inkling of the cause of the deficiency—unless observation should prove (what is utterly improbable, not to say impossible) that special scales of reduction of breathing volume obtain in particular diseases.

The Spirometer too, tells nothing of the distribution of the air inspired—in this view clinically inferior even to semi-circular and antero-posterior mensuration, which point out the side and the region, receiving too much or too little air.

*Treatise on Auscultation and Percussion, translated by W. O. Markham, 1853.

†Clinical Handbook of Auscultation and Percussion, by Weber, translated by John Cockle, M. D., London, 1854.

For these and other reasons the Spirometer affords no help, where the presence of pulmonary disease being certain, its nature remains an insoluble problem by the methods of physical diagnosis."

Dr. Walshe dwells upon the importance of the percussing tap being quick but without force, unless it is for some deep seated organ we are searching. In practice this caution is certainly needed for there are to be met with auscultators who, in their anxiety to elicit sounds, give unnecessary pain and at the same time render the sounds less acute by striking too hard. In consequence of which, they have a muffled character, caused from interference with the vibrations of the chest walls. Thus force in the blow, instead of intensifying, in reality weakens the sound and lessens its duration.

In the alterations of sound of percussion in disease, Dr. Walshe divides them into four types, (1) Tonelessness or dullness, (2) extra resonance, (3) hardness and (4) muffled tone. Each of these notes possess four distinct properties, intensity, pitch, duration, and quality, besides Piorry's sense of resistance, now generally recognised as of great importance. These distinctions are all well defined, yet we acknowledge we prefer with Dr. Davies,* Skoda's classification of full and empty sounds, as less complicated and more easily learned.

Dr. Walshe agrees with Stokes, and thus disagrees with Dr. Hughes Bennett,† as to the pathognomonic signification of the *cracked-metal* sound, as indicative of cavities in the lungs. He says he has heard, and we think we have, in children and others with pliant chest walls when they held their mouths open, sounds on percussion closely resembling the sudden expulsion of air from cavities produced by the same means.

We looked with interest to see what Walshe should say of Skoda's, to us satisfactory, solution of the modification of the tympanitic sounds and the inconsistency of the old explanations. He has, since his previous edition, examined the matter more closely, and considerably modified his views.

* Lectures on the Physical Diagnosis of Diseases of the Heart and Lungs by Herbert Davies, London, second edition.

† Clinical Lectures on Medicine.

Skoda, it will be remembered, drew attention to the modifying influence of tension on tympanitic sounds. He stated that if the walls were not much stretched over a cavity containing air, the percussion sounds would be invariably tympanitic; on the contrary, when they were firmly stretched, the sounds would become less or not at all tympanitic or even dull. When we reflect upon this point, who has not seen an excessively distended abdomen which did not give to the stroke a tympanitic response? When the walls of the chest are thin and yielding we may have a tympanitic sound although there be but little air. Why this anomaly? Is it not because the vibrations of any membrane or string are in proportion to their tension? Just so a guitar string vibrates very indifferently if not stretched. So is it, as Skoda suggests, with the walls of the chest or of the abdomen. The more the walls vibrate, the more they interfere with the vibrations of the air underneath them; over loose walls they vibrate very slightly, for nearly the whole force of the stroke is transmitted to the contained air. Thus scientifically does the Vienna Professor explain the fact that the fully distended stomach, and the tense thorax produce non-tympanitic sound; while on the other hand, the relaxed stomach, the collapsed lung, and the compressible abdominal walls give a distinct tympanitic sound. Is it not then clear as to the cause of our not having tympanitic percussion sound in excessive emphysema? As strong a contradiction as it appears, when the air vessels are most distended in general emphysema, we but rarely meet with tympanitic sounds, and never in interlobular emphysema. Whereas, in the partial emphysema so often met with in pneumonia, and around the indurated portion of tubercular infiltrations, tympanitic resonance is very frequent.

We find another fact relative to the presence of tympanitic sounds fully corroborated by Dr. Walshe, although he does not admit Skoda's explanation. Dr. Graves'* had observed sometimes over pneumonic consolidation a tympan-

* Clinical Lectures.

itic note, but Skoda had reported from his examinations, that not only was such the case in pneumonia, but wherever there was consolidation or compression of the lung tissue, as in pleurisy, cancer &c. As astonishing as the fact is, and as contradictory as it apparently is to physical laws, yet it seems to be well established that the lungs, partially deprived of air, yield a tympanitic sound.

The fact is positively stated and proved by experiments on the dead subject, as well as by the observation of the constant phenomena, "that when the lower portion of a lung" (we quote Skoda's words) "is entirely compressed by any pleuritic effusion and its upper portion reduced in volume, the percussion at the upper part of the thorax is distinctly tympanitic. When the lung is much reduced in volume by compression, but, still contains air, its sound is invariably tympanitic." M. Henri Roger* details fifty-one cases of effusions into the thorax, in forty-one of which on the same side, above and on a level with the upper border of the fluid, he discovered a clear tympanitic sound. He concludes that the presence of this sound is of as much value in the diagnosis of pleurisy as œgophany. Moreover, he states that pulmonary parenchyma, less aerated than in the healthy state, gives under percussion a more or less tympanitic sound. Thus a portion of lung infiltrated with serum or blood or with tubercular matter and which is not deprived of air, gives a more or less empty, dull sound in proportion to the amount of air contained. Therefore, in percussing the chest one obtains a tympanitic sound in certain cases of tubercular phthisis, œdema, pneumonia and pulmonary apoplexy.

Dr. Walshe's confirmation of these views is of the greater value on account of his evident prejudice against the German school. He says, "Skoda is unquestionably right as regards the matter of fact. Tubular, or the large-scaled amphoteric quality is not very uncommon over parts acutely hepatised; is common on the level of chronic solidification; and is an

"* Archives General d' Medicine, 1855. See also, the edition of 1860, of Barth, and Roger's *Traité Pratique d'Auscultation*."

almost unfailing attendant at the apex regions, over pleuritic effusion at some period or other of its course.’’ Thus the fact seems clear, but not so its explanation. Formerly Walshe resorted to the theory that there was a secretion of intra-pleural air, but he now frankly admits that such formations are not admissible on any existing pathological principles. He says :

‘‘ The most intelligible rationale of the peculiar tone seems to be this. If the consolidating material within or without the lung be not accumulated to such extent as to obliterate by external pressure the multitude of minute bronchiæ within it, these tubes (like so many miniature tracheæ) give their special resonance, conducted by the quasi-solid or fluid material intervening, to the percussion note on the chest-surface. If, on the contrary, the accumulation be sufficient to close up the fine tubes, the source of tubular sound is annulled ; and the resonance becomes that of the consolidating material and consolidated lung-tissue combined ; that is, acquires the character of the toneless type. But there still remains for interpretation an important point, namely, the constant extension of the tubular note beyond the area of the compressed lung (sometimes as far as the vertical line of the nipple of the other side,) for which no one, as far as I am aware, has ever attempted to assign a cause. Obviously it cannot depend on the compressed lung being pushed to the opposite side ; hence the unavoidable inference that *the percussion sound of a given spot may depend not on the condition of the parts directly beneath, but of those more or less distant in the fellow half of the thorax.* To me the phenomenon seems only intelligible as a result of *horizontal impulse* and *horizontal conduction.*’’

In the chapter on Auscultation, Dr. Walshe rather objects to the use of Camman’s double stethescope, but his objection is of very little value because he, evidently, has never used it or even seen it. It unquestionably does alter both the pitch and the quality of the sounds, and intensifies all that are transmitted through it. Yet it is available, not only to those whose hearing is impaired, but it enables others to detect delicate morbid sounds not appreciated by immediate auscultation or by the ordinary single stethescope. It is not an

instrument to be placed in the hands of the young student, but we claim it as an improvement of great value to those familiar with the ordinary phenomena of auscultation, and who will carefully apply it first to healthy reverberations of sound. We may almost say, it is to the explorer of the heart or lungs, what the application of the microscope is to the pathologist, who cannot do more with his naked eye, than judge of the coarser physical alterations.

Without the least disposition to detract from the credit due to the late Dr. James Jackson, jr., of Boston, for his discovery of the sign of prolonged expiration, we must admit that he and many who followed him greatly exaggerated its value as diagnostic of tubercular deposits. As Dr. Walshe correctly observes—

“ Many persons forget that what may appear in a given individual, as compared with another, prolonged expiration, is really in him a natural state; some confound with it the pharyngeal expiratory sound; the normal existence of lengthened expiratory sound at the right apex of many females is habitually forgotten; and too few observers seem to be aware that under whatever circumstances an obstruction exists to the free circulation of the air in the lungs, the expiration will be prolonged.”

M. Fournet* has drawn out this sign of prolongation of the expiration to an extent of over-refinement far beyond the truth. He was said in Paris to have condemned to an inevitable death, from tubercular infarction, many of his best friends who continued to be blessed with good health for years afterwards. But there is no disputing that Fournet did good service in calling attention to the fact that the morbid alterations of quality, rudeness, &c., ordinarily commence in the expiratory act. Dr. Theophilus Thompson † asserts that in two thousand cases of tubercular consumption, he found a prolonged expiration in one-seventh, but it does not follow that it was an abnormal sound. It was reserved to Dr.

* “ Recherches Cliniques sur l’Auscultation.”

† Clinical Lectures on Pulmonary Consumption, American edition, 1854.

Austin Flint to give us the true explanation* of this, as well as to furnish us important aids in the differential diagnosis of the various kinds of prolonged expiration, by drawing attention to the alteration of pitch of the two acts of respiration. In health, as any one can test, the pitch of the inspiratory act is higher than that of expiration; the expiratory murmur may be prolonged, altered in quality, and increased in intensity in exaggerated respiration, emphysema, bronchitis, &c., but when it is prolonged from induration the pitch is altered, which is not the case in the other instances. As the sound becomes gradually more tubular or bronchial, it is so from the elevation of the pitch. This feature is easily appreciated, and we have found it highly distinctive of broncho-vesicular respiration as differing from other sounds so frequently confounded with it previous to Dr. Flint's paper. It may be that we are influenced by a desire that our distinguished countryman should have the credit we think due him, and are jealous for his reputation, but we must express surprise that Walshe should have so slighted these views as merely to allude to them, in a note, as a suggestion of but little value. The reader, by referring to Dr. Flint's treatise on the respiratory organs, published in 1856, will find how clearly and satisfactorily he demonstrates his propositions on this point. Particularly have we found his application of the differences in the pitch of the sounds beautifully diagnostic in a point, so often puzzling to auscultators, between tubular respiration as indicative of induration or of a cavity or, as it is ordinarily spoken of, between bronchial and cavernous respiration. And who has not seen the most experienced auscultators sometimes deceived in marking out cavities where, at the autopsies, they were proved to be merely indurations of the tissue? Dr. Flint does not say that we can always distinguish bronchial respiration from cavernous by the relative pitch of inspiration and expiration—the latter higher than the former in bronchial, and lower in cavernous—

* On Variations of Pitch, &c., Prize Essay, Am. Med. Association, 1852.

but that it is a distinction of great value, and clinical observation has convinced us that he is correct.

There are many points in this new edition that Dr. Walshe ably discusses, and which we would like to notice, but our restricted space forbids. He gets rid of Skoda's plausible explanation of ægophony simply by denying it, whereas we think if he had repeated his experiments he could not have been so positive, and would have been less dogmatic. In regard to the sounds of bronchial respiration and bronchophony he is more fair, as he is in his views as to the conducting power of consolidated lung. He has modified very much the opinions he formerly expressed on these points. He now admits that Skoda was correct in supposing that the sounds of the chest become altered and intensified by consonance, but he thinks that he did not go far enough for that echo and unison-consonance play an important part. To make his present views clear we will quote his own words.

"There seems to be three ways, as far as now known, in which a sound may be reinforced beyond the seat of its production; by, what may be called *unison-resonance*, by *consonance*, and by *echo*. In all three, reflection of sound is concerned; but the laws of that reflection are in each case different. * * * By unison-resonance is meant the reinforcement which occurs in the box of the guitar or violin, when notes are produced from their strings, or when a musical box, instead of being held in the air, is placed on a table; by consonance is understood the reproduction of certain notes of instruments, or of the voice by other instruments, standing by; by echo is meant the well known phenomena of repetition of sounds. All three agree in that the reinforced sound may exceed in intensity the original, and, besides differ from this in quality."

We have not room for his careful analyses of these causes, which are ingenious and very interesting. His conclusions we must give.

"Finally," he says, "bronchophony seems to be a resultant in lung-consolidations, of conduction and echo; in emphysema, of conduction and unison-consonance; in lung-excavations, of conduction, unison-resonance, and echo; in

cases of tumor uniting a bronchus, or compressing pulmonary substance to the surface, of conduction in the main, of unison-resonance in the secondary degree. Besides, when the necessary acoustic conditions exist—that is, when the tones of the laryngeal voice chance to bear a certain mathematical relationship to the fundamental note of a resounding space in the chest—true consonance may take a part in the production of bronchophony."

We have no space for any criticisms, which we might be presumptuous enough to make, upon the second part of this work, on the diseases of the lungs. We cannot forbear calling Prof. Lawson's attention to the remarks in regard to the treatment of pneumonia. He recommends venesection, it is true, and believes it has diminished the mortality, but he adds—

" Whether venesection possesses the power of actually arresting the disease at the very outset, and preventing the occurrence of hepatization, must be held to be yet scientifically undetermined. If, on the other hand, in the immense majority of cases, it be vain to push bleeding to extremes, in the hope of producing any such effect, clinical observation has more than once led me to at least strongly surmise that active congestion may be prevented from reaching the exudation stage by a well-timed abstraction."

For the due force of this statement it must be known that Dr. Walshe is physician to University College Hospital, and has a very large practice, especially in thoracic diseases, consequently his experience is immense, yet he has only "strongly surmised more than once," that exudation may be prevented by venesection, but he is "undetermined." Whereas Dr. Lawson* lays it down as if it was a positive, undenied and undeniable fact. Dr. Watson† states he has not bled for years in pneumonia; and Dr. Austin Flint‡ has only once in twelve years. It matters but little how men hold to the theory of bleeding when they do not carry it into practice, which teaches much more powerfully than their precepts. Dr. Walshe states emphatically,

* American Journal Medical Sciences, Jan. 1860. † Treatise on the Practice of Medicine. ‡ American Journal of Medical Sciences, Jan. 1861.

as does Dr. S. D. Gross in a recent article,* that there has been no change of type of disease, but that the discontinuance of the frequent resort to blood-letting is simply owing to a reaction from the excesses of the Sangrado school.

We commend especially to the reader the article at the end of this volume, in the appendix, on “change of climate,” as containing some practical suggestive hints of value.—On the whole, this new edition must be acknowledged as a valuable addition to our medical libraries. The enterprising American publishers have probably never with more appropriateness affixed to any medical work their expressive motto “Quæ prosunt omnibus.”

F. D.

IV. *Anatomy of the Arteries of the Human Body, Descriptive and Surgical, with the Descriptive Anatomy of the Heart.* By JOHN HATCH POWER, M. D., Professor of Descriptive and Practical Anatomy in the Royal College of Surgeons, &c. &c. Dublin: Fannin & Co. 1860. 12mo. pp. 374.

A knowledge of the relations and distributions of the various arteries of the body is perhaps more important to the surgeon than that of any other division of Anatomy. Recognizing this fact anatomists and surgeons have not been backward in compiling monographs upon the arteries, and the profession is not, therefore, deficient in excellent works of this character. The manuals of Sir C. Bell, Smith, Harrison, Neill, and many others, have tended greatly to assist the student in acquiring, and the practitioner in retaining, the knowledge requisite for the every day duties of the surgeon.

The work before us is admirably adapted to the purposes for which it is intended, and is useful both to the student in the dissecting room and for those practitioners in the rural districts who do not possess the opportunities for refreshing their memories by actual dissection.

The first thirty-seven pages are occupied with a very clear and full description of the heart, which contains all that can be considered as established relative to the anatomy of this organ. The figures which are given in illustration are remarkably good.

Besides the anatomical descriptions of the arteries, which are very correctly and fully given, a considerable portion of the volume is occupied with the surgery and pathology of these structures. The book is therefore doubly useful. All the details in the various operations on the arteries are given, and of the more important we have very full histories furnished. In looking over these latter we are reminded of how important a part American surgeons have performed in this connection, and we see that full justice is done by Mr. Power to the labors of Mott, Post, Mussey and others, whose operations have so much redounded to the credit of their country.

We commend this little book to the favorable consideration of the profession, and we should be glad to see it placed, by republication, more at the command of those for whom it is intended.

It is well illustrated with good wood cuts, and is printed in a manner highly creditable to the publishers.

W. A. H.

V. *The Pocket Anatomist; Being a Complete Description of the Human Body; for the use of Students.* By M. W. HILLES, formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, &c. Philadelphia: Lindsay & Blackiston. 1860.

From a perusal of the above pretentious title, which raises such fair expectations, our readers would hardly be prepared for the disappointment created by an examination of the work itself—a 12mo. volume of 263 pages—and that in the face of the familiar proverb, “there is no short road to knowledge,” which the author quotes in his preface. There is no denying

that the facts contained in this little book are facts, although some of them are a little antiquated, as, for example, the association under "7th nerve" of the auditory and the facial nerves, and under the "8th" of the glosso-pharyngeal, the Pneumogastric and the spinal accessory nerves: but "the complete description" is so compressed into abrupt sentences, made shorter by all possible verbal abbreviations, that we doubt sadly whether that literary dyspeptic, the medical student, would be able to assimilate any portion of the digest, or carry away from the green-room anything more than a heart-burn after *cramming* with our Pocket Anatomist. We lay much blame to the account of this "*ridiculus mus*," especially if we regard it as a pander to the growing distaste for reading in an age of books, or, at least, as a temptation for seizing upon systematized superficiality and avoiding that serious labor which alone can promise substantial results. We are disinclined to look favorably upon any scheme which might mislead the unwary neophyte into a belief that the science of anatomy is but a dry catalogue of abbreviations, and although we are duly informed that this work—or rather "such works"—"are not intended to supersede the more elevated treatises on the various branches of medical science," we opine that "medical students" would more frequently become acquainted with the real sources of knowledge if such seductive pocket nothings were not written.

While we deny to the author all claim to the gratitude of the friends and future patients of the students who spend their money reluctantly in books, we can suppose a class of persons who may consult the work in question, if not with advantage, at least without detriment; we mean those who, having previously fairly mastered the subject, warn the less experienced against such incomplete guides as the book we notice.

We perceive that the publishers have thought it appropriate to print the Pocket Anatomist on rather indifferent paper, which is not their custom with readable books.

C. J.

CHRONICLE OF MEDICAL SCIENCE.

I.—MEDICAL PATHOLOGY AND THERAPEUTICS.

1.—*Remarks on Expectation in Diphtheria.*

A recent epidemic of pseudo-membranous angina has afforded me an opportunity of making some remarks which suggest the question: is diphtheria susceptible of spontaneous cure?

For some time I had seen daily a considerable number of children and adults, who presented a uniform redness of the tonsils, and variously sized white or grayish patches. The mildness of the general symptoms rendering any active interference unnecessary, I merely prescribed in general a demulcent gargle, which was sufficient to effect a cure. Reports were however rife of persons having died in the neighborhood from malignant sore-throat, and I found that active cauterization was frequently resorted to, with results not invariably satisfactory. I thence concluded that my cases must have been of a nature altogether different from the formidable disease which bears the name of diphtheria.

What subsequently occurred, however, modified my opinion in this respect.

On the 7th of February of the present year, I was summoned to a child, aged ten, who complained of difficulty and pain in swallowing. The skin was hot and moist, the pulse 130. I detected on the right tonsil a dingy, yellow patch, about ten lines in diameter, the mucous membrane around being turgid, and of a bright scarlet color. On the 8th the patch had invaded the entire anterior aspect of the uvula, and disappeared on the 9th from the tonsil, but returned, somewhat diminished in size, on the following day. Up to the 14th, false membranes thus became detached, leaving the surface they had occupied of a bright red color, were reproduced in much smaller proportions, and eventually disappeared altogether. I should add that simultaneously with the diphtheric patches, hard and painful glandular enlarge-

ment was observed at the angle of the right maxilla. The nature of the disease was therefore perfectly evident, it was unquestionably an instance of pharyngeal diphtheria. Active interference was obviously imperative, but the child being fractious, and the mother weak and unintelligent, it was with difficulty I succeeded in exacting a promise that a gargle with decoction of blackberries and honey should be used. As a bribe to use the gargle, a copious allowance of pastry, and some undiluted wine were given to the child, who recovered.

This fact induced me, in subsequent cases, merely to watch the progress of the disease and prescribe tonics. I recollect, among others, a girl who was recovering from measles, when she became effected with pharyngeal angina, and the false membranes gradually invaded the inner face of the cheeks and lips. This patient was allowed food and wine-and-water during the entire duration of her illness, a detergent with honey was the only remedy prescribed, and a complete and rapid cure was likewise effected.

It is obvious that brushing the pharynx of a person in health with a corrosive acid, would be calculated to induce very serious illness. When pseudo-membranous deposits exist in the fauces, this imprudent practice may cause the disease to spread to parts, which would otherwise have possibly escaped contagion. The history of diphtheria and of its treatment must be acknowledged to savor slightly of romance. It is generally admitted, for instance, that diphtheria very frequently begins in the pharynx, and thence extends to the mucous lining of the respiratory organs. Now, in the epidemic which I have observed, not one of the children I attended for croup presented any pseudo-membranous patches on the tonsils, or the fauces, previously to, or during the progress of the laryngeal disease. We are all too much inclined to adopt blindly the opinions of our masters. That disposition of the mind is rare indeed, which leads the practitioner to watch the progress of disease, free from foregone conclusions, and to permit nature to effect a cure by her own means, when the necessity for active interference is not evident.—*LIMOUSIN, Physician to the Hospital of Bergerac (Dordogne.)*

2. Treatment of Epilepsy—Belladonna—Quinine—The Ligature—The Actual Cautery.

Dr. Brown-Séquard generally commences the treatment of epilepsy by belladonna. The usual dose of this remedy for

an adult is one quarter of a grain twice a day in pill or mixture. It is very rarely indeed seen to produce any of its specific effects, as dilatation of the pupil, in cases of epilepsy. At our last visit one patient came who complained of dimness of vision, and whose pupils were evidently dilated by the drug; but this was the exception, proving the rule, as the case was not one of epilepsy or any convulsive disorder.

In the cases in which there appear to be a tendency in the fits to appear at regular intervals, for instance once a fortnight, Dr. Brown-Séquard prescribes quinine in large doses, *e. g.*, five, ten, and even fifteen grains, to be given at intervals, shortly before the fit is expected. By this means the fit is frequently prevented, and the patient goes on to the next, or even to a longer period. In reference to these large doses of quinine, it is well known that some temporary deafness will often follow, and curiously enough, Dr. Brown-Séquard states that there is a kind of deafness which the administration of this remedy in large doses will cure.

Another therapeutical means in epilepsy is the ligature, in cases in which the aura epileptica, arising from one of the limbs, is present. Dr. Brown-Séquard has two patients, both girls, about the age of nine years, in the hospital, in whom the fits are frequently stopped in this way. The ligature is kept constantly on the arm; when the child feels the warning, the nurse of the ward tightens the bandage, and the fit is prevented. The success in these cases has been very great, and we shall, shortly, by the courtesy of Mr. Smith, the House-Surgeon, be enabled to place their details before our readers. It is of great consequence to have the ligature in readiness, so that it may be tightened at once. Grasping the limb tightly will do in the absence of proper means, but it is much better to keep a bandage or folded handkerchief tied on the arm ready to be tightened. Dr. Brown-Séquard has invented an apparatus to encircle the arm, and to tighten by a screw, in order that the pressure may be quickly applied.

Dr. Brown-Séquard frequently uses the actual cautery locally in a variety of nervous affections. In epilepsy, patients frequently complain of either a pain or a sensation proceeding from some part of the body. A woman, aged 20, had had fits for thirteen years; they invariably commenced with pain in the left side, just below the mamma. Dr. Brown-Séquard applied the cautery to this part in two or three places. The relief was most marked. It had not prevented the fits altogether, but it had reduced their number

very considerably. Instead of having them every other day, she had them only once a week. The cauterising iron is heated to a white heat, and is then applied suddenly to the part once or twice. It appears to cause but trifling pain, and the patients do not seem at all to dread its repetition.—*Medical Times and Gazette.*

3.—*Treatment of Paralysis of the Pharynx.* By M. CHASSAIGNAC.

A young chlorotic girl became effected, doubtless in consequence of the debilitated state of her constitution, with paralysis of the œsophagus and pharynx. She found it utterly impossible to swallow any kind of food, and was visibly wasting away, when her medical attendant introduced an œsophagean tube, through which soup and milk were conveyed into the stomach. Each of these meals, however, costing her five francs, she was unable to continue to incur this expense, and was overwhelmed with grief at her sad situation, when M. Chassaignac admitted her into his wards, where she has been taught to introduce the tube herself. We recently saw her, before a numerous audience, perform this little operation, which she accomplishes with much dexterity, inserting the œsophagean tube through the nose. It is, of course, of the utmost importance that this poor girl should have thus been enabled to support life by so simple a process, which will give sufficient time to overcome the paralysis of the pharynx and œsophagus by the influence of general treatment, or by a recourse to the valuable assistance of electricity.—*Jour. de Med. Pratique.*

4.—*Hepatic Gravel; a Modification of Durande's Remedy.*

In a letter forwarded to the *Gazette Hebdomadaire* by Dr. Duparcque we meet with the formula of a mixture which is better tolerated by the stomach than the celebrated remedy to which Durande has given his name, and yields results equally rapid and certain in hepatic cholic induced by biliary concretions. Dr. Duparcque replaces the essence of turpentine by castor oil and combines with it ether as follows: Rx. Ætheris, 1 dr., Ol. Ricini, 1 oz., Syrupi, 1 oz.—M. To be taken every half hour at first, and afterwards every hour in doses of one or two teaspoonsful.—*Championnière.*

II.—SURGICAL PATHOLOGY AND OPERATIONS.

1. *Iodide of Chloride of Mercury in the Treatment of Acne.*

Take calomel 5.95, iodine 1.98, pound the mixture in a mortar, and introduce it into a glass matrass. Placed upon hot sand, the compound soon becomes liquid and greenish, and solidifies on cooling. The preparation, exposed to the air, promptly assumes a red hue, which is its natural color. The ointment of which this salt is an ingredient is prescribed thus: Iodide of chloride of mercury, 12 gr.; lard, 2 ounces.

According to the intensity or previous duration of the disease, M. Rochard modifies the strength of this pomade. Pills prepared with the same substance are exhibited at the same time that the ointment is used externally:—R. Iodide of chloride of mercury, 4 gr.; gum, 15 gr.; bread-crumb, $2\frac{1}{2}$ 3; Orange-flower water, q. s.—for 100 pills.

The ointment should be applied to the diseased surfaces only, and in mild cases one inunction daily, for three successive mornings, is sufficient. The parts then remain uncovered while the reaction lasts which follows each application of the pomade. This series of inunctions is repeated after an interval of a week, and so on until a complete cure has been effected. In most instances, external treatment alone is requisite, if persevered in for several months. It is, however, useful to assist its operation by the exhibition of two or three pills daily, seldom more, of the same medicine. Among the patients who found relief from this medication, M. Rochard relates, in his treatise on skin diseases, the history of a woman, aged 30, in whom the remedial agent in question was used, four years ago, in M. Nélaton's wards. It was an inveterate case of acne, and the frictions were repeated four or five times in the twenty-four hours, for nine successive series of three days each. They were then performed twice only in the day. The patient, at the same time, took one of the pills for ten days, at first, and afterwards two, together with infusion of saponaria, and invigorating diet. The intervals during which the medicine was discontinued, were of four, seven, six, four, seven, six, eight and six days. This treatment was instituted in ten separate series of days, which extended from April 8th to July 20th, when the pustular eruption appeared to be fading away. The medication was persevered in for some short time, and a complete cure was the result. Four years have since elapsed, and the young woman enjoys perfect health.

EDITORIAL AND MISCELLANEOUS.

MEDICAL SOCIETIES.

It is somewhat surprising that in Baltimore—a city possessing 250,000 inhabitants, several large hospitals, and a medical faculty second to none in the country for professional learning and practical skill—there should be no medical society in active operation. We are aware that the Medico-Chirurgical Faculty may by courtesy be considered as still existing, and we believe the Pathological Society (which did much good in its day) is not formally dead, but for some time the lamp of science has burned low in their halls, and if not utterly extinguished, it might as well be so for all the light it gives. For all practical purposes, therefore, the assertion holds good that there is no society in Baltimore composed of members of the medical profession meeting for the advancement of science, the good of humanity, and the interchange of facts and opinions among the members.

Now we do not hesitate to say that this is a most unfortunate condition of affairs, and one which, if it continues to exist, must tend to the disadvantage of the profession as a body, and of its members individually, to put it upon no higher ground.

Every one who knows anything of the world is not ignorant of the advantages of association and co-operation. It would be superfluous for us to argue this point, and when we say that the application holds good for our profession we only make a statement the truth of which all will admit.

It should be clearly borne in mind by physicians that when they have prescribed for and cured their patients they have performed but a portion of their duty to society, and not a jot of that which they owe to their brethren in science.

Those in large practice have through medical societies the power to communicate valuable information to their juniors, and those whose predilections lead them to the more theoretical parts of medicine are frequently able to furnish a stand-point for the young and enthusiastic but inexperienced worker. In the conversations and debates which ensue valuable ideas are brought forward and important facts are adduced, to which, perhaps, the speaker himself attaches but little value, but which are the key-notes that others have been seeking, and which otherwise would never have been revealed and made available for the purposes of science.

As means of increasing harmony and tending to advance the social interests of the profession medical societies cannot be overrated, and their influence is readily perceived in those cities which have most encouraged them. Let us, then, have something of the kind ; let life be imparted to the feeble institutions which still exist ; or, if they are beyond the reach of mortal aid, let those whose eminence and influence warrant them in undertaking the task see if something cannot be done to prove that the physicians of Baltimore are not unmindful of the duties they owe to humanity and to one another.

We may be met with the response that physicians in large practice have no time for societies. If such is the case then Baltimore physicians are much more busy than their brethren in London, or Paris, or Vienna, or New York, or Philadelphia—in all of which cities many active medical societies exist, the members of which are composed of the most eminent and busy physicians in the world.

We do not wish to insist upon the adoption of our views. The object of this journal is not to direct the opinions of the profession, but to follow the path which that profession may deem most right. We do not assume to be reformers, and, therefore, if what we have said falls upon barren ground, we shall not trouble ourselves to again bring the matter forward.

PROFESSOR GROSS.

This distinguished surgeon announces in the last number of the *North American Medico-Chirurgical Review* that he is engaged upon a work which will treat of the "Injuries and Surgical Diseases of the Scalp, Skull, Brain and its Membranes," and requests physicians and surgeons having anything of importance to communicate relative to these subjects to transmit such information to him.

TO READERS AND CORRESPONDENTS.

Owing to a press of original matter we have been unable to publish in this number several interesting articles on hand. From the same cause we have been obliged to cut short our "Chronicle of Medical Science" and to omit our "Selections" altogether.

A NEW MODE OF EXTRACTING FOREIGN BODIES IMBEDDED IN THE SOFT PARTS.—Several years ago we described the very simple plan adopted by a distinguished practitioner of Senlis, Dr. Leclerc, for the removal of hooks imbedded in the skin. He raised the foreign body and with a pair of scissors or a bistoury removed the cutaneous cone in which the hook was included. We read in the *Revue de Thérapeutique Médico-Chirurgicale*, that M. Robert has recourse to a somewhat analogous plan to discover, without displacing them more deeply, small metallic substances lost in the soft structure. This surgeon inserts a tenaculum into the skin above the spot occupied by the foreign body, raises the integument, and divides it obliquely. A flap is thus formed which exposes the subjacent parts and permits the surgeon to seek out and extract the foreign body, which is often at once visible, and is readily seized and removed with a forceps.

A CAUSE OF EPILEPSY.—Dr. Demeaux, of Puy-l'Evêque, forwarded a communication interesting to human physiology and constituting an important question of public hygiene.

From a certain number of cases, which have fallen under his personal observation, the author is convinced that *a state of ebriety in man, at the time of sexual intercourse, is often a cause of epilepsy in the offspring.* In the course of twelve years, M. Demeaux has met with 36 epileptic individuals, and he has been enabled to ascertain that five were procreated while the male parent was in a state of intoxication. He has traced twice congenital paraplegia to the same cause, in one family, and twice also idiocy and insanity, in subjects aged respectively seventeen and five years. M. Demeaux hence concludes that intoxication exercises in the generative act a baneful influence upon the foetus, and that it is highly important that this fact be widely promulgated.

DOCTORS AND CARRIAGES.—The Elizabethan physicians did not ride in coaches. Their usage was to visit their patients on horseback, sitting sideways on foot-cloths, like women. The last Presidents of the College who visited their patients in this way were Simeon Fox and Dr. Argent. Harvey to the last went his rounds in that fashion. Aubrey describes him thus:—“He rode on horseback with a foot-cloth to visit his patients, his man following on foot, as the fashion then was, was very decent, now quite discontinued.” By the end of Charles the Second’s reign, successful physicians had for the most part taken to carriages; and an old writer accounts for the rise in physicians’ fees from ten shillings to a pound on the ground that the more expensive style of equipage required a larger income for its maintenance.—*Atheneum.*

On September 27 M. Ricord delivered his last lecture at the Hôpital du Midi, and during two hours delighted his audience. He gave a summary of the works which illustrate his name. “We have rarely assisted,” writes an observer, “at an ovation more enthusiastic, more sincere, and more deserving, than that which was bestowed on the Professor and on the Physician—by those whom he had taught, and those whom he had treated as his patients.”

MARYLAND AND VIRGINIA MEDICAL JOURNAL.

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T H E

MARYLAND AND VIRGINIA MEDICAL JOURNAL.

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New Series.

ORIGINAL COMMUNICATIONS.

ART. I.—A CLINICAL LECTURE ON CERTAIN CASES OF UTERINE
DISEASE;

Delivered in the Baltimore Infirmary, January 16, 1861,

BY SAMUEL CHEW, M. D.,

Professor of the Principles and Practice of Medicine in the University of Maryland.

Gentlemen:—During the present session you have had opportunities for observing in this hospital the symptoms and treatment of several cases of epilepsy.

Among them you may recollect the case of a sailor who entered the Infirmary laboring under intermittent fever, and who presented during the cold stage of his disease the well-marked and violent phenomena of an epileptic seizure—a seizure which occurred on three several occasions, and which was probably due to congestion of blood in the cerebral veins.

In another case, that of Mrs. M., the epilepsy was apparently dependent upon *uræmia*, or impure condition of the blood, induced by Bright's disease of the kidneys.

In a third case it was associated with disease of the cardiac valves, originating from rheumatic inflammation of the heart, and causing such obstruction of the right chambers of that organ as prevented the ready return of blood from the vessels of the brain.

In a fourth instance, epilepsy was occasioned by the poisonous action of lead. It occurred in the person of a sailor, who left the house during the first week of the session. When admitted, this man was suffering from *wrist-drop*, or paralysis of the extensor muscles of the hands, which had commenced soon after an attack of lead-colic. While under treatment, he exhibited, in addition to that disorder, several other of the most remarkable effects of saturnine poisoning. His gums were marked by the blue discoloration so characteristic of that agent; he suffered severely from arthralgia or neuralgic pain in the joints; and he was affected at different times by delirium, by coma, and by epilepsy.

All of these cases which I have enumerated were repeatedly explained to you at the bed-side. I refer to them on the present occasion only by way of introduction to an account which I wish to lay before you of an instance of epilepsy which occurred some years ago in my private practice, and which, perhaps, presents some features of sufficient interest to make it worthy of your attention.

I was called in November, 1857, to visit a lady from the country, who had come to this city for the purpose of obtaining medical assistance. She was about twenty-five years of age, of a nervous and excitable temperament, but apparently not in ill-health. She stated that she had long been subject to epilepsy, having been attacked by that disease when about thirteen years old, at the period of the first appearance of the catamenia. Her first menstruation was attended by her first attack of epilepsy, and she had never menstruated since without experiencing at least one paroxysm of that malady, and frequently several paroxysms, occurring just before the secretion commenced, during its flow, or soon after its cessation. The symptoms for the first two or three years were slight and

mild, resembling those which occur in the imperfectly developed form of epilepsy, termed by the French pathologists the *petit mal*. During the last nine or ten years the attacks had been of excessive violence, and characterized by all the usual phenomena of the disease—the scream, the falling to the ground, the spasms, the insensibility, the foaming at the mouth, the biting of the tongue, and subsequently the protracted sleep. She had been several times severely injured by falling, when suddenly attacked in the absence of her family,—twice by falling with her face against a hot stove. Her mind was active and intelligent; but her friends were of opinion that her memory had for the last year or two been sensibly impaired. She had been married about four years and was the mother of one child. Her catamenial function had been uniformly regular, but was always attended by more or less of pain, which without being violent was yet sufficient to occasion annoyance and distress. Various remedial means had been used for her relief, but without success.

Such was the history. It presented, as you will readily perceive, an unfavorable prospect. The violence of the symptoms and the long persistency of the disease discouraged the expectation of much benefit from medical treatment. Still, there was one circumstance which afforded a ray of hope. The apparent connexion between the epilepsy and the condition of the uterus made it probable that the nervous disease was of *eccentric* and not of *centric* origin; in other words, that the irritation which occasioned the attacks was seated principally not in the brain, but in the uterus. Cases of epilepsy arising from eccentric causes are in general more curable than those occasioned by direct disease of the nervous centres. They are more commonly within the reach of our remedial means; and of the few instances in which epilepsy has been cured the greater number have probably been of this kind.

On examination the cervix uteri and os tincæ were ascertained to be unnaturally sensitive and irritable. By help of

the speculum they were found to be of a deep red color, and around the os there was a considerable extent of superficial ulceration or abrasion of the mucous membrane.

The nitrate of silver was freely applied to the affected surface, and this operation was subsequently twice repeated at intervals of four or five days. The patient remained in the city till the latter part of December. During this period she menstruated once, and for the first time in her life without pain and without an attack of epilepsy. She returned home feeling very much improved in health, and continued exempt from epilepsy for nearly three years. In December, 1860, in consequence apparently of undue indulgence in the pleasures of society and of some indiscretion in relation to diet, she experienced a return of her former disease. She had suffered, when I last heard from her, a single paroxysm ; but as the exciting cause of this was obvious, she was confident that by greater prudence in future she could easily ward off all danger of a repetition of the attack.

Physicians who boast of curing epilepsy are sometimes tauntingly advised to publish their cases as early as possible, lest a return of the disease may deprive them of the opportunity. There is no doubt that the triumph has often been proclaimed prematurely. The disorder is suspended far more frequently than it is permanently cured. Such may be the event in the case which I have related. I submit it, therefore, not as a proof that a violent and protracted case of epilepsy has been radically removed, but merely as showing that great relief has certainly been afforded under apparently very unfavorable circumstances. Let the fact go for what it is worth ; *valeat quantum valere oportet*. The patient was for nearly three years rescued from the violence of a malady which for twelve years previously had been every four weeks tormenting her by its horrible visitations. He who considers a deliverance for even a few years only from such a disease as of no value or advantage, possesses but a very imperfect idea of the nature of epilepsy, and of its fearful effects upon both body and mind. His opinion has probably been formed from

that calm and stoical estimate of the miseries of others, which in many minds is associated with the most tender and delicate sensibility to their own.

But I have called your attention to this case not barely in reference to its uterine origin and the result of its treatment, but also that I may bring to your notice the subject of the direct application of nitrate of silver to the uterus in certain affections of that organ.

You are aware that it has of late been the fashion with many physicians to attach great importance to congestion, inflammation and ulceration of the cervix uteri and os tincæ. They consider the existence of these conditions to be extremely common. They believe that wherever they occur they exert a powerful and most injurious influence upon the general health of the patient. They maintain that numerous diseases arise from these morbid states of the uterus, and can be relieved and removed only by subduing the maladies upon which they depend. And they have published many cases in which the treatment founded upon these opinions is said to have been promptly successful.

Now it is quite possible that there has been a good deal of error and of exaggeration in much that has been said and written on this subject. It is possible that some have been misled by an excited imagination, and have adopted opinions and published statements without sufficient examination and reflection. And it is also, perhaps, not wholly incredible that some, under the influence of dishonest motives, have made false representations of their experience.

It has certainly been pretty well proved that, while congestion and ulceration of the cervix uteri are conditions by no means rare, they are frequently found to produce little or no sensible influence on the general system. They have frequently been discovered after death in cases where during life no symptoms of any kind had indicated their existence. They have been frequently found in instances where there were no traces of disease in any other part of the uterus; where the lining membrane and the proper tissue of the organ itself were per-

fectedly healthy. It has also been ascertained that between ulceration of the cervix and the ailments which are said to result from that condition there is in reality no regular and uniform relation.

These facts have led many highly respectable physicians to entertain a very unfavorable opinion of the doctrine that ulceration of the cervix is a potent and common cause of some of the worst diseases to which the female system is liable. There are many who look upon the whole subject as either a delusion or a fraud, and believe that those members of the profession, who—with a taste certainly as bad as possible—have proclaimed themselves *Apostles of the Speculum*, are embarked in a crusade which is either exceedingly foolish or exceedingly wicked.

“Judgment is difficult,” says Hippocrates. The human mind too often manifests a tendency to oscillate, pendulum-like, from one extreme of opinion to the opposite extreme, both perhaps equally erroneous. Such appears to have been its course in relation to the present subject. If ulceration of the cervix uteri has been overrated by some, its importance has been unreasonably depreciated by others.

Such ulceration has certainly existed in some instances without disturbing the general system. But it does not thence necessarily follow that it must in all cases be equally harmless. The effect of almost all local diseases depends not barely upon the nature of the disease itself, but also, in part, upon the condition of the system at the time. A topical affection which in one case produces no influence upon the constitution, in another may occasion the most formidable consequences. And it should be considered that perhaps we have not yet learned to discriminate with sufficient exactness the different appearances presented by the ulceration in different cases; and that with the increase of our knowledge we may in course of time be enabled to form more accurate conclusions respecting the pathological significance of the lesions which we detect. It would seem, also, not a little unreasonable and arrogant to set aside all the testimony in favor

of the treatment of the diseases in question by local means, which has been advanced by numerous physicians, among whom there are many who possess every claim to respect and credence that can be furnished by education, experience, skill and moral worth. Why such testimony should be rejected in the case of one class of diseases and admitted in relation to any others, it would be difficult to explain.

I have been long in the habit of employing the speculum in cases of uterine diseases. I find it often useful as an aid to diagnosis, and as a means for facilitating the application of local remedies. But I am very far from agreeing with the enthusiasts or knaves—call them which you please—who profess to consider it the most valuable invention of the age. It has no claim to such rank. But it may yet be justly regarded as in many cases useful, and in some cases perhaps indispensable.

Out of many instances in which I have used it with advantage, I will state to you the particulars of two or three in which the treatment which it guided and assisted was especially beneficial.

I attended in August, 1855, a lady who was in the third month of pregnancy, and was suffering with symptoms which threatened the occurrence of abortion. She had been married three years and had aborted three times, each time in the third month of gestation. On each of these occasions the abortion was preceded, she said, by the same symptoms as those for which I saw her, and each time she was carefully attended by an experienced physician. From the symptoms and the history of the case I suspected the existence of inflammation of the cervix uteri, and on examination found that part swollen, red, abraded, and presenting a granular surface where the mucous membrane was wanting. Nitrate of silver was applied three or four times and with prompt and decided relief. She went without further disturbance of health to the full period, and was delivered of a healthy child.

In March, 1857, I was called to see a lady, who, I was told, had been suffering for seven weeks from menorrhagia.

During all that time the hemorrhage, she stated, had been constant, generally slight, but occasionally very copious. She was excessively enfeebled, pale, and anaemic, her pulse small and thready, and her extremities cold. Active treatment by opiates and astringents had been used, but had afforded no relief. The cervix uteri was enlarged, soft and tender. Examined by means of the speculum, it was found to be red, and presenting evidence of extensive superficial ulceration. Nitrate of silver was freely applied. This was done in the afternoon. The patient had a better night than she had experienced for two weeks previously. The next morning the hemorrhage was greatly diminished. The caustic was applied twice subsequently. The improvement was rapid and uninterrupted. Under the influence of tonics, chiefly the preparations of iron, good health was gradually restored, and has continued up to the present time.

Another case, closely similar to the foregoing, I saw during the past summer in consultation with Dr. Charles C. Keyser, of this city.

Mrs. A. aborted, on the 14th of July, in the beginning of the fifth month of gestation. No unpleasant symptoms followed, but she was advised to confine herself to her room for three weeks. At the end of this time, feeling as well as usual, she took a ride into the country. On returning she complained of being greatly fatigued and exhausted. Dr. Keyser was sent for, and found her suffering from profuse uterine hemorrhage. Cold was applied, astringent injections were used, and she was ordered thirty drops of Tr. ferri chloridi with the same quantity of fluid extract of ergot every fourth hour. By these means the flow was gradually arrested. After being kept in bed for a week, she was permitted to take gentle exercise. She had left her room scarcely an hour before the menorrhagia returned. The same remedies were again employed, but without any sensible effects. The discharge was very abundant. After it had continued more than a week, nitrate of silver was applied. The hemorrhage almost immediately ceased. At the next monthly

period the secretion was unnaturally copious and protracted. On the seventh day it was judged advisable to make another application of the caustic. This produced the same beneficial effects as on the former occasion, and was followed by speedy recovery.

I could relate to you, were it necessary, many other cases in which the application of nitrate of silver to the os and cervix uteri was succeeded by prompt and signal improvement in the condition of the uterine system and of the general health; improvement which, according to my best judgment, could be properly ascribed to no cause except the local application.

It has been contended, I am aware, that in many instances which have appeared to be benefitted by local treatment addressed to the uterus, the amendment has resulted not from that treatment, but from the action of other means which were employed at the same time. Such, I doubt not, has frequently been the case. Physicians, like other men, are liable to be mistaken with regard to the relation of cause and effect. The old man who assured Sir Thomas More that the increase of the Goodwin sands was occasioned by the building of Tenderden steeple, and the Norwegian peasants who attributed the failure of the herring fishery on their coast to the introduction of vaccination, were not the first philosophers or the last who have erred in aetiology. Wiser men have often gone equally astray. To discover the true causes of the effects we witness is one of the greatest and most common difficulties encountered in the study of our science, or of any other science. The wisest and most sagacious members of our profession frequently draw false inferences from their experience, and ascribe to the influence of their remedies the salutary changes which have arisen from other agents, and with which the remedies employed have had nothing to do, except perhaps to retard and diminish them. But this error, though extremely common and sometimes unavoidable, may yet, under certain circumstances, be sufficiently obviated. In the four cases which I have recounted,

it appears to me to be certain, if there be any certainty in therapeutics, that the effects which followed the cauterization were occasioned by that operation. Those cases were selected because they appeared to be less open than most others to any objection respecting the cause of the improvement which occurred. In all of them the only means used in addition to the local treatment were such as had been employed before that treatment and found wholly ineffectual. On the most careful consideration of all the circumstances of these cases, I am therefore of opinion that the improvement which took place was due principally, if not exclusively, to the local remedy.

But there is another question to be answered respecting this method of treating the diseases of the uterus. If it be admitted that such treatment is often useful for the removal or relief of maladies which render life a burden and a misery ;—if it be admitted that it not infrequently succeeds when all other known means have failed ;—one would be apt to suppose that there could be no diversity of opinion respecting its utility and importance, and that it would be universally acknowledged as one of the valuable resources of our art. Such harmony of judgment is not found to exist. There are physicians who recognize the efficacy, but question and deny the propriety of the operation, and urge objections against it from moral considerations. They talk of the danger of its being abused and perverted to impure purposes, both by physicians and their patients, and of the stain which such an operation must inflict upon female delicacy and refinement. A very learned and distinguished medical author has allowed himself—with a forgetfulness of decorum and decency ill becoming a vindicator of morals—to designate the speculum as the *phalloid instrument*, and to express the opinion that no female can be subjected to its use without such loss of moral purity as can never be compensated by improvement of physical health.

Loud professions and broad phylacteries are sometimes mistaken by the youthful and inexperienced for proofs of moral

excellence. By such judges the pharisees who declaim against the speculum may perhaps be admired and venerated. Others, it is possible, may draw a different inference, and remember with Chaucer, that it is

—“*the lewed peple who comunly
Do demen gladly to the badder ende.*”

But without troubling ourselves with an inquiry into character and motives, it is sufficient for our purpose that the arguments which have been urged against the speculum are open to obvious and satisfactory answers.

If we are to reject all remedial means and appliances but those which can never be used in such a manner as to prove injurious, we shall soon find our therapeutic resources very materially diminished. What would become of alcohol, of opium, and of chloroform; or of strychnia, of prussic acid, or indeed of the whole *materia medica*, except flaxseed and sarsaparilla? And what would be thought of many of the common and important achievements of surgery? In employing the speculum, scarcely the least exposure of the person is necessary; far less than occurs in many surgical operations, against which no one as yet has deemed it requisite to lift up his voice in defence of modesty.

Objections might be made, and are made by some, against the admission of male accoucheurs into the obstetrical chamber. Is it wise or humane to foster and encourage such feelings? It could be shown that they have often led to sad and fatal consequences. The *strong-minded* Mary Wollstonecraft, who was certainly no prude, yet resolved, in compliance with the prudish advice of Dr. Fordyce, to be attended in her confinement by only a female nurse. She died in labor by an accident which any of you, had you been present, could have remedied with ease and certainty. And so it has been in various other cases where similar feelings have been allowed to interfere. Queen Caroline, the consort of George the Second, was attacked by hernia, and died of that disorder in consequence of having from erroneous feelings of delicacy concealed from her medical attendants the nature of her dis-

ease. Her daughter, Louisa, Queen of Denmark, died from similar concealment of the same malady. Is it the modesty of those royal ladies or their *unwisdom* that appears most conspicuous? Gibbon, the learned and *luminous* historian of the *Decline and Fall*, went about for several years with an enormous hernia which he could never bring himself to mention to a surgeon, or even to his valet-de-chambre, and which he strangely flattered himself that no one was aware of, although it was impossible for any one who saw him to avoid perceiving the unwieldy protuberance; and he persevered in his vain attempt at concealment until his stomach was dragged down to the neck of the sack, when an operation became absolutely necessary, and was performed too late to be successful. Such *mauvaise honte* of the great historian will appear the more extraordinary, and perhaps somewhat ridiculous, when we remember the character of the notes to his history, and the just and pungent remarks on their obscenity which they drew from the pen of Porson.

But it is useless to cite illustrations of the folly, and indeed criminality, of such false modesty; it has for ages been proverbial; *stultorum incurata pudor malus ulcera celat*, says Horace. It is abundantly manifest that there is nothing culpable or indecent in submitting to the use of whatever remedies may be prescribed by science for the preservation of life or the mitigation of diseases. The means employed *in good faith* for such purposes can never inflict a wound on virtue or modesty. Whether they are *so* employed will depend upon the moral character of those who employ them; and for the wise and judicious selection of persons in whom so much confidence is to be reposed, the responsibility must of course rest with the parties principally concerned.

The only moral lesson to be drawn from the consideration of this subject, is one which will readily occur to your own minds. It speaks of virtuous principles and purity of life as indispensable requisites in the character of all who aspire to perform usefully and worthily the duties of a true physician. "A magistrate of the republic," said Pericles to the

tragic Sophocles, "should have not only pure hands but also pure eyes." The same sentiment is applicable in an eminent degree to the members of our profession. If you desire the esteem and confidence of the wiser and better part of the community in which you live, you must have the appearance of being pure and virtuous ; and remember that in order to have that appearance the easiest method, and the only safe and honorable method, is to be what you would appear.

ART. II.—SEA SICKNESS—ITS CAUSE—WITH OBSERVATIONS IN REGARD TO IT BASED ON PERSONAL EXPERIENCE.

BY WM. MASON TURNER, M. D.,

PETERSBURG, VA.

In the last number (November) of the *Charleston Medical Journal*, I read an article on *Sea Sickness*. It was inserted in the *Journal* under the general head of "Abstracts and Translations," and is originally from Dr. Armand, in the *Gazette Medicale de Paris*. That article has suggested the following few remarks :

A good deal has been written on this complaint, which for several reasons we might designate as singular. For many years, it has been noticed. The *nausca navigantium* of the Latins, the *mal de mer* of the French, the *seekrankheit* of the Germans, and the *mareo* of the Spaniards, all correspond to our *sea sickness*, and has been written of in as many tongues as above given. The grand point which has been discussed, and which is at issue now, concerns the cause of the affection. The answer seems ready enough to any question of this nature. It appears very natural to say, that the cause of sea sickness is—*the sea of course*. There is truth in the answer, of a verity ; and yet that answer may be forced to mean almost anything—for instance—that (1) sea sickness is occasioned by the *sight* of the sea ; (2) by the peculiar *odor*

arising from the sea water ; (3) by the *calmness* of the sea ; (4) by the *pitching* of the sea ; (5) by the *rolling* of the sea, and so on, *ad infinitum*, or *ad nauseam*, at least. On many of these circumstances, or peculiarities, it has, indeed, been contended, depends the true cause of sea sickness. The distressing phenomena of the complaint are known either by experience, by sight, or by hearsay, to almost every one. It is useless to say anything on that head. It has been known, in some instances, to produce death by its violence, by occasioning haematemesis, by rupturing aneurisms, and by producing abortion in cases of advanced gestation. Of course the fatal results here being the effect of the violent effort to vomit and the collateral forces called thus into action. The *cause*, however, as I have mentioned above, is chiefly deserving of interest, as regards sea sickness. It has been stated as different by a dozen different authors. At one time it was thought to be the peculiar odor arising from salt water, or an absence of the peculiar atmosphere which floats over the land. Again, for a long time, it was considered to be the unnatural motion, imparted to the viscera of the abdomen and to the stomach, occasioning them to rub against each other, thus producing the nausea. Again, it has been contended, that it is owing to an improper, or irregular circulation, which leaves the brain badly irrigated. The grand nerve centre being thus deranged, the stomach by the intimate relation it sustains to it, is secondarily affected through the sympathetic system and we have the result—nausea and vomiting. Some have explained sea sickness by comparing the fluids in the body, so far as ascent and descent are concerned, to the mercurial column of the barometer—*i. e.*, that the body being unnaturally placed—thrown or tossed about, as is the case in swinging—the blood has an unwonted tendency to the brain, on which it presses, impairing its functions ; then secondarily the stomach partakes of the derangement, and we have nausea and vomiting. And yet, again, it has been argued that perverted vision, occasioned by unusual impressions produced on the brain through

the retina (I mean *through or by* means of the retina as the medium), is the *true* cause of sea sickness. Dr. Armand espouses this view *in toto*. It was that feature in his article which arrested my attention, and made me at once condemn his position as untenable. Such I can readily prove it to be. To this I will come anon.

So far as regards the odor theory, very little need be said. We have undeniable facts to prove that this cannot be the cause. Some of our fishermen, who live on Cape Cod, have their houses so near the waves of Old Ocean that the spray dashes into the doors. I have been there, and speak from experience. I have often taken breakfast in those houses, and seen the billows roll to, and even wet the door-sill. We have, here, every odor which it is possible to have from the sea ; saline encrustations cover everything, and the atmosphere is what might be termed *excessively marine*. What effect is visible in the inhabitants—nausea and sea sickness ? No ; but rosy cheeks and hardy frames.

I think, however, there is some truth in the theory of the unnatural motion imparted to bowels and stomach ; and likewise in regard to the opinion that sea sickness is occasioned by inequality of the circulation, which leaves the brain impoverished. The barometric-mercury-column solution is not now generally received, and for good reasons. How could the theory act in regard to persons who occupied a horizontal position throughout the voyage, in which case the blood-pressure on the brain amounts to nothing, or almost nothing ? It is with Dr. Armand's view, however, that I have particularly to deal—that of tracing sea sickness simply to *perverted vision*. For the sake of doing him full justice, I quote the Doctor's words :

“ In some people it (sea sickness) is produced if they *look* out of a carriage at the sides of the road, and *watch* the trees apparently in rapid motion.”

I have italicised the words “*look*” and “*watch*,” to call the attention to the fact that the Doctor has the *vision* intimately concerned. Again :

"All these circumstances, *including sailing*, have this in common, that they give rise to an interference with the laws of *perspective*, produce *perversion of vision*, cerebral fatigue, and a whole series of sympathetic phenomena, reacting from the brain upon the stomach, and the entire organism. A *proof* that the fatigue of the *eye* is in these cases the chief cause of the peculiar feeling is, that after having waltzed, the most certain means of getting rid of vertigo is to *shut the eyes* for an instant; while on board ship a pretty sure means of avoiding sea-sickness, is to *look steadily on one point*—a better still, is to lie down and *close the eyes.*"

The italics in the entire quotation are mine. From the extracts given, the Doctor's views are manifest. His grounds, I think, I can soon render untenable. I have sailed over salt water a great deal in my journeyings about the world; have crossed the Atlantic twice; have several times crossed and recrossed that tumbling, tossing, seething cauldron, St. George's channel; and more than once have steamed from one end of the Mediterranean to the other. During my voyagings I have experienced weather such as *old salts* say they never saw before, and never desire to see again. In storm or calm I have paid a strict attention to sea sickness, endeavoring to determine on some particular cause for it. I imagine I am pretty well prepared to speak of it, both from observation and experience. It happened to be my fortune (*good or bad*), in May of 1859, to sail as surgeon in the good ship Admiral from Havre, in France, to New York. During that voyage, I took especial pains to note the amount, the degree, and apparent cause of the sea sickness, of which there was much throughout the passage—and to observe particularly the peculiar state of the patient as regarded respiratory organs, digestive apparatus, etc. From summings up in my note-book I learned the following when I arrived in New York: 1. That in the calmest weather, so far as the *sea* was concerned, no matter how great our rate of speed (and we frequently had fine breezes, while the sea was smooth), *there was less sea sickness*—showing that impressions made on the corpora quadrigemina of the brain, through the vision, by

passage through the water, had no effect. 2. That the worst sickness and most of it we had when the ship was laying-to, against head-winds and head-seas, and when she was alternately pitching in the chops and alternately rolling in the troughs of the sea. This was when we were motionless, so far as regarded onward progress—and our only motion was an undecided, reluctant, very slow drifting to leeward—attaining perhaps the rate of a quarter of a mile in an hour—a speed which would not “pervert” the “vision” by any means, and could not, for the emigrants, poor creatures, were huddled in the “‘tween-decks” of the ship, below water-line, where at mid-day the apartment is as dark as at midnight. Hence the vision could not be perverted; of course it could not have occasioned the sea sickness. 3. Again, in perfect calms as regards the winds, when the ship did not have steerage way on her, but a long, sullen, lazy roll was on the sea, the remnants of a late blow, sea sickness was ever on the increase, though it was not so bad as in a chopped sea, when the boat was laying-to, as noticed above. This was the case when we were crossing the Grand Banks of Newfoundland. Sometimes when in this latitude the breeze died so completely away that we fished. There was no steerage-way at all on the ship. The vision was not perverted here; it is just as much perverted when we stand on the beach at Cape May or at Newport. 4. I noticed so far as regards the patients, that those were most affected who had crammed their generally healthy stomachs with all kinds of trash before coming aboard. I noticed this point very particularly. Those persons who, presuming on the strength of their stomachs on land, had dared to proceed to sea on such a presumption, were most often and most speedily laid low; while those persons whose digestion was bad on land and on sea—who had been suffering for some time with liver or dyspeptic complaints—were those most exempt from it. From this, I argued, generally, that those who were in ill health were least liable to sea sickness, and I accounted for this by giving as a

reason, the already unsusceptible state of the stomach, liver, or brain—the latter, perhaps, primarily. This leads very naturally to what I consider the most tenable reasons, given for a certain circumstance, or train of circumstances, causing sea sickness. But I will defer this yet a moment.

In refutation of Dr. Armand's proposition or conclusions concerning perverseness of vision causing sea sickness, I have brought illustrations *au contraire*: First—in observation (1)—where swift passage through water, in calm seas with good winds, produced the least bad effect; and secondly—in observation (2)—when in a heavy gale, chopped sea, and vessel laying-to, when all the emigrants were below and out of sight of everything—in other words, where vision was not called into play at all—there was most sea sickness. More than that—and I am indeed thankful to be able to report this particular point—there was a man aboard the Admiral who was entirely blind, having a hard cataract in one eye, and corneal opaqueness complete in the other; a man who had not seen for twenty years; who could not tell day from night; yet that man was violently sea sick for thirty-eight days—in fact, from the time we left the “channel” until we made Sandy Hook. Perverted vision, with a vengeance! Again, how can it be possible that perverted vision could have occasioned sea sickness in one who kept the state-room and the bed from port to port? I hold just such a case now in my memory. A lady, on the French steamer Mèandre, was sea sick from the time she left Marseilles until she landed at Alexandria, in Egypt. Yet she never stirred from her state-room, which was below the saloon deck, and where there was no light scarcely, which she avoided altogether by closing the deadlight and foregoing the use of the lamp. So much, then, for Dr. Armand's “fatigue of the eye” and “perverted vision,” which to a blind man and to a woman shut up in what might be termed a “black hole,” is something to be thought of!

From careful observation I come briefly to remark, that I attribute sea sickness *simply and entirely to the unnatural*

motion of the ship, which motion affects, by deficient circulation (chiefly) and otherwise, both brain and stomach—it matters not which first. Moreover, I think it first and chiefly attacks persons of healthy organization—healthy viscera—especially where the said viscera, as the stomach, has just been imposed upon and tampered with. Generally speaking, I think the stomach primarily affected, (by the unwonted motion), and the dizziness, headache, &c., are secondary and dependent. We all know when we strike a person on the stomach it will occasion vertigo, and sometimes complete unconsciousness; if we strike the same person on the head vomiting will ensue—as in concussion. This shows an intimate relationship, or, as it has been called, the existence of two brains.

It is very true that riding backward in a carriage and waltzing will generally produce, in those unaccustomed to it, a sickness resembling sea sickness. I think both are due to the same cause.

In waltzing there is a wheeling round, an unnatural motion, which throws the brain and other viscera into abnormal positions—hence the effect. In this case I do not deny that the blending of many objects confusedly and hurriedly together on the retina, tends to increase this feeling. Yet those objects are not present at sea to blend together; there is nothing outside the ship save sky and water, an occasional black fish, sometimes a swarm of Mother Carey's chickens, and a solitary gull! As to riding backwards, I have this much to say, and I speak from experience:—When I am shut up in a close carriage and jolted over a rough, up and down road, then I am sick at my stomach, or virtually *sea* sick—and it matters little whether I look out of the carriage window or not. When I am on a smooth road this effect is not produced. I have often taken a jaunt in a carriage out to the Bois de Boulogne, near Paris, and although riding backward, I have never suffered from sickness at stomach. The asphalte roads and avenues around and in Paris are as level, and as smooth as railways. I might well ask, also, if

vision is at fault in riding backwards in a carriage, why is it that persons are less apt to be sick in an open carriage, where vision is less obstructed? And why is it that those who are made sick by riding backward in a carriage are never (or if at all the cases are few) sick when riding backwards in a rail car? I am an individual example as regards this point. I have ridden backwards in French, German, Swiss and Austrian rail cars,—wherein one-half of the passengers are necessitated, from the peculiar construction of the carriages, to ride backwards—and have never as yet been sick, though I gave my "vision" every chance of being "perverted." We never hear of a person being sick—sea sick or sick at the stomach—whenever on a river steamer. Who was ever thus affected when steaming up the Hudson, on the James, or down the Alabama? Yet the vision here has every possibility of being confused. We often see sailors made sick when they first arrive in port and go ashore. They stagger and reel like drunken men. Every one can readily account for this stumbling and sickness. The sailor is accustomed to tread his ship's deck to the ceaseless roll of the sea. When he gets on land he forgets this peculiar (*his* customary) mode of perambulation; he raises his foot and careens to starboard and larboard, to windward and leeward, expecting, from habit, to be met half-way—but, unfortunately for his expectation, the ground is a fixture. The sailor thus sets up an unnatural motion, a motion which throws his stomach topsy-turvy, and the result is the fact—notwithstanding the paradox—that he is sea sick on land. I have often experienced this feeling myself. No one will say that the vision is at fault.

So far as regards the cure for sea sickness, I think little can be done. The different viscera must become habituated to the unnatural motions of the ship and to the effects of inequalities of circulation thus produced. I know of nothing better than to wear a broad bandage tightly around the stomach and abdomen, for manifest reasons, and the resolve to "tough out" the sickness by braving the weather, and en-

deavoring in storm or shine to keep the deck and learn to walk it. Lying down about 'midships, where the boat is more on a pivot, and, of course, more at rest—and keeping the horizontal position will relieve sea-sickness ; but so soon as the upright position is resumed the nausea and vomiting returns. When the case gets sufficiently violent and protracted as to merit notice, I found nothing to act better than small quantities of calomel, ($\frac{1}{4}$ of a grain), placed at intervals on the tongue and allowed to dissolve. This, preceded by a tea-spoonful of the fluid ext. valerian, and a mustard plaster over the stomach (allowed to produce vesication), never failed to be productive of good results.

The advantages resulting from sea sickness are positive and negative. Sometimes the agonizing efforts to relieve the stomach occasion a haematemesis, as remarked before ; and fatal results have ensued in advanced pregnancy. A moderate sea sickness, however, acts beneficially, by exciting the liver to more vigorous action, and by occasioning the stomach to reject surplus bile. More than that—it *eventually* tones the appetite and leaves the bowels in a good condition by the increased peristaltic movement communicated. As Dr. Chapman (I think) was accustomed to say—"it shakes up the gall bladder and clears the ship fore and aft."

I hope my remarks, as regards Dr. Armand's "perverted vision," may not appear to the profession as egotistical ; nor do I plead guilty to the charge of being hypercritical. Nothing but the desire to come at the truth on an interesting question—wherein I think I have a right to speak—has actuated me. My observations, for as much as they are worth, let them go.

ART. III.—SUCCESSFUL OPERATION FOR THE RADICAL CURE OF HERNIA.

BY RICHARD M^CSHERRY, M. D.,

OF BALTIMORE.

Mr. P., a fine youth of seventeen years of age, applied to me on the 28th of September last, to know whether he could be cured of an oblique scrotal hernia, on the right side, which had been troubling him for the last three years. He had been a pupil at a military school, and was very active in his habits of life, was fond of field sports, and had been much in the saddle. He was greatly distressed at having a disease which interfered so materially with his comfort and prospects, and he was quite ready to adopt any course likely to effect a permanent cure.

I believed that this could be accomplished in his case by Wutzer's operation, which I explained to him, when he consented at once to submit to it. On the 1st of October, then, preparation was made for the operation by clearing out the bowels freely with castor oil, and by removing the capilli, which he partially plucked away with tweezers, but finding the process tedious the parts were shaven by a razor so far as necessary.

On the 2d of October, assisted by my friend, Dr. W. C. Van Bibber, I performed the operation of applying Wutzer's instrument in the usual manner, which will now be described, with all the leading details of the case. The instrument, it should be stated in the first place, is not of the cylindrical form used by Wutzer, but it is flattened (one's finger, or thumb, firmly compressed upon a resisting surface gives a good idea of the form) after the suggestion of Mr. Spencer Wells, the transverse diameter being much greater than the antero-posterior. This modification is a practical improvement on the cylinder, inasmuch as it converts the ring into the form of a chink, offers additional security against the descent of the intestine and leaves the invaginated surfaces more approximated to each other when the instrument is removed.

The patient being placed on his back on the side of his bed, thigh slightly flexed and shoulders slightly elevated, after Dr. Van Bibber and myself had carefully traced the canal, which easily admitted the forefinger up to the internal ring, I inserted the instrument, well greased, up to the orifice, withdrawing at the same time the finger which I had used as a guide. The wooden plug, with the invaginated integuments, being *in situ*, I passed the needle (about the size of a crow quill, with a trocar point and plated surface, except, of course, at the point,) along the tube in the plug, and through the invaginated and external integuments and intermediate tissues. The wooden compress was then applied with moderate firmness, the point was capped, and the operation was complete. The patient complained smartly of pain. I left him to return at the end of two hours. Upon my return I found him complaining still more of the severity of the pain, which, he said, was most severe where the plug pressed against the falling bowel—that is, at the internal ring. I eased the pressure by loosening the screws, which gave a little relief; but he found still more from having a firm pillow placed under his hips, so as to elevate the lower portion of the pelvis. I gave him, moreover, thirty drops of the elixir of opium, which was repeated at bedtime.

The next morning I found him very much more comfortable, free from severe suffering, but complaining of numbness along the thigh, owing to pressure on the anterior crural nerve. There was considerable tenderness to the touch, the soreness radiating from the point punctured. The tenderness was most decided above the internal ring, and in a line towards the anterior superior spinous process of the ilium. Coughing or sneezing always gave painful impulse.

On the 4th, 5th and 6th suppuration was gradually developed around the puncture, the process of which could readily be observed through the slit in the wooden compressor. There were no unpleasant symptoms; surrounding soreness was soothed by the application of olive oil and laudanum.

On the 8th he complained of unusual pain, principally in

the upper portion of the thigh below the groin. There was considerable soreness along the course of the canal in which the instrument lay. There was no fever, but he slept badly and was becoming nervous. To allay excitement, I ordered thirty drops of the elix. opii to be given at bedtime, which produced a good effect.

On the morning of the 10th I removed the instrument, there being at the time considerable pain in the surrounding parts, with nervous and febrile excitement. The general condition of things was quite satisfactory when the instrument was removed. Some sero-purulent matter escaped from the outlet of the invaginated skin, or *doigt de gant*, as it is sometimes appropriately called. I applied a suspensory bandage only, directing him to keep at rest, and to cleanse the parts with soap and tepid water. During all the time he had been upon very light diet, and there had been no action on the bowels. On the 12th a dose of oil cleared out the intestinal canal ; before it was taken I applied a hard compress over the tract of invagination and bound it down with adhesive strips.

From this time there was a steady improvement day by day. By the 20th the puncture was quite well, and all tenderness to pressure was gone. By the 27th he was able to walk out, wearing a truss and suspensory bandage by way of precaution. The outlet of the invagination exhibited the moisture of mucus membrane.

He returned to school early in December. On the 24th he called to see me ; was perfectly well ; wore his suspensory bandage, but no truss, which he objected to on account of some induration and sensibility of the spermatic cord. He had been pursuing his usual occupations without any hindrance, had been gunning, and riding on horseback, though I had advised him to defer such trials for some time longer. The invaginated canal was quite closed, and the orifice dry, there being no longer any exudation.

I had the pleasure of hearing this morning (January 31st) that he continues perfectly well.

It would be superfluous to make any extended remarks on this case, or on the operation. My only object is to record an additional instance of radical cure, and not to discuss the merits or demerits of the operation. That many failures have followed upon it is very certain ; that it has been attended with many cures is equally certain. There is scarcely anything in surgical practice more important than the radical cure of hernia, and any means of effecting this, not involving, under any ordinary circumstances, danger to life, is exceedingly desirable. Wutzer's operation has been more successful than any other so far devised by surgical skill. Under circumstances perfectly favorable, as in the case which I have here recorded, there is every reason to hope for success from it. Failures may be expected to follow in bad cases, in operations ill performed, or from the use of defective instruments. But the principle involved is good, and the surgeon must be ready to modify his operations according to the requirements of his cases. In large and old ruptures, the operation I performed upon this young gentleman would be inadequate ; but it may be suitably modified. Prof. N. R. Smith, of this city, suggests in such bad cases the use of a large plug with several metallic pins, or tacks, inserted at different points from without. This would require that the plug should be of soft wood, that the pins, which might be made of steel, gilt or plated, with screw-heads, could be readily inserted into it. The suggestion is certainly a good one. Perhaps nothing would be better than metallic, or even thread, sutures, not entering the wood at all, which would act as fine setons.

So far as Wutzer's operation is concerned, the surgeon may deviate, according to his own judgment, from the manner of it, or from the original instrument, so that he keeps the principle in view ; which is to plug up a patulous orifice and canal with a new growth sufficiently firm to resist the usual pressure from within the abdominal cavity. By adapting the operation in every case to the existing exigencies, there is no doubt, in my mind, that the result will be, most commonly, successful.

ART. IV.—ON THE LOGICAL DETERMINATION OF GENUS, SPECIES
AND VARIETY.

BY A. DENNY, M. D.,

OF SUGGSVILLE, ALA.,

With a Prefatory Letter from DR. FORWOOD.

DARLINGTON, *Maryland*, Jan. 1, 1861.

Editors of the Maryland and Virginia Medical Journal:—I herewith send you an interesting paper from the pen of my friend Dr. A. Denny, of Alabama, late President of the Alabama State Medical Association, on the subject of Genus, Species, and Variety.

This paper was transmitted to me with the permission to use it as I might deem most proper. Of its great value, there can be no doubt; and I take pleasure in thus exercising my privilege by laying it before your readers.

Darwin's work and the works of many previous writers, particularly within the last ten or fifteen years, on species, demonstrate very clearly to the mind of every student of natural history, the undoubted necessity felt for the use of well-defined and unequivocal language—particularly with regard to “species” and “variety.”

If the original definitions of these words are to be radically and permanently altered, those who use them in the altered meaning should declare in the outset of their essays, to prevent confusion and misunderstanding, the precise significance which they attach to them.

The Rev. Dr. Bachman, of Charleston, in his discussion with Dr. Morton, on species, etc., through the *Charleston Medical Journal and Review*, several years ago, was guilty of resorting to the absurd quibble of using the word “variety” alternately in its proper sense, and in the sense of “species,” as best suited for the advancement of his theory; and as better enabling him to escape from the argument of his opponent.

He adopted, also, the meaningless and contradictory term "*permanent variety*;" by which he designed, through this confusion of words, to make it really appear, (in speaking of the *genus homo*,) that black was white! And by this evasive, ambiguous, and equivocal use of language, he endeavored to refute the doctrine of the plural origin of Man—which the progress of science is daily verifying—in order thus to maintain a foregone, and utterly unscientific, conclusion.

If there be a *permanent* subdivision of genus (which, however, Mr. Darwin denies), and if naturalists should become agreed that the word "*species*" is not *specific* enough to clearly and unmistakably indicate that subdivision, then let them adopt some other term that will better express the idea and prove more generally satisfactory.

The object of Dr. Denny's paper is to point out a few of the irresistible conclusions that are to be drawn from acknowledged premises; and to restrain writers to the legitimate definitions of the terms "*species*" and "*variety*" as given by all lexicographers, and as accepted by all men who are not interested in establishing the "*permanent variability (!) of Man*.

Among the definitions given by Noah Webster to the word *variety* is the following, which is precisely to the point:—“*In natural history, a difference not permanent or invariable, but occasioned by accidental change.*”

Dr. Denny does not propose discussing, in the present paper, any of the scientific points involved in the subject—the special distinctive marks of species, etc.—but simply desires to invite attention to the intelligible—the logical—use of the much-used terms "*species*" and "*variety*."

When there shall be an understanding between all parties as to the exact definitions to be attached to these words, an important step will have been gained in the advancement of scientific classification in natural history.

Truly yours,

W. STUMP FORWOOD, M. D.

In view of the confusion which has thus far existed among many men, as to the proper signification of the word "species," it is self-evident that a writer on species must clearly specify what he does, and what he does not, mean by the word; or else others cannot know precisely of what he may be discoursing. The same remarks plainly apply to every important word of unsettled meaning.

While certain knowledge of facts—physical science—affords the basis of all true classification, any discord, disorder, or inconsistency in any written system of classification is of itself alone sufficient to condemn that written system; and such a system is called illogical; that is to say, every written or oral announcement of any two or more propositions on any subject of mutual attention, *must be* either logical or faulty.

The assumed basis of any two or more propositions may be in itself entirely true, but the propositions themselves disorderly, or discordant with the basis, or with each other; that is to say, illogical, and, of course, fallacious. Or, the propositions may be in themselves orderly, harmonious, and logical, *but not logically founded* on a correct basis, and, of course, must be false.

The foregoing are some of the undoubted truths, together with the unanimous agreements of naturalists, on which to base the logical determination of the word "species." We may arrive in order at the distinct and proper meaning of the word species, by beginning anteriorly to all classification; that is to say, with the definition of the word "*individual*," in reference to classification.

Every single or individual person, or thing, is distinguished from every other person and thing, of course, by no other than such marks or characteristics as are peculiar to that individual alone; and it is evident that neither the origin nor any so-called permanency of these individual marks can affect their actual existence, nor their proper significance as individual marks. But the individual has many other marks, which are not peculiar to itself alone, but some

of which it has in common with many individuals of the same kind; some in common with many individuals of similar kinds; some in common with all plants and animals; and some in common with all organic beings.

Now, to classify these different distinctive marks in their proper order, we must, of course, exercise our faculties of classification. The narrowest and lowest so-called classification which has been attempted by some, and denied by others, is that which is based upon the historic appearance of some peculiar mark,—not in one individual, nor in a very few separate individuals, but in an *assemblage* of *domesticated* individuals (for no assemblage of the kind has ever appeared remote from human protection,)—such as the milk-white and hornless cattle, bob-tailed dogs or pigs; and which historic may, by human protection, be perpetuated.

Now such an assemblage is distinguished by being denominated a “variety;” and a peculiarity of this so-called “class” is its *constant tendency to disappear*, as a distinct class or assemblage, *without the constant protection of man*. Accordingly, a variety is an assemblage of individuals, whose distinctive mark has appeared within historic time,—not permanent,—neither can by any means be *constantly* propagated: For instance, an assemblage of breeding white cattle or poultry *cannot be prevented* from producing offspring of different colors.

Now it is manifest that if such assemblages be properly called *varieties*, then, of course, this word, as above mentioned, should be distinctly appropriated, and not used ambiguously. If the word variety properly signifies a *variable* assemblage, then such an expression as “permanent variety” is a contradiction in terms.

But we shall presently see that nothing is gained except confusion and its consequences, by those who use such expressions as “variety” and “permanent variety,” to signify two distinct so-called classes; for they often omit the word “permanent,” and so confound the two. These who use the expression “permanent variety,” use it to signify a class

which has “*permanence of type*,” as distinct from that so-called class which has not this permanence ; but most others do more distinctly and conveniently use the single word “*species*” to distinguish *this same* class from “*variety*.”

But whatever word or words may be used in classification, nevertheless it is manifest that they should not be unnecessarily objectionable in any respect, as, for instance, by reason of ambiguity, inconvenient length, or by involving any unsolved problem. The word “*species*” is *itself* convenient, but the manner in which it is used by some, to imply an unsolved problem, and not the word itself, is really objectionable. But any word is liable to the same abuses ; while the expression “*permanent variety*,” has, as we have seen, objections insuperable from itself ; and also stands in the way of some shorter and more distinct expression.

Those who use the expression “*permanent variety*” are agreed that species are “only well-marked and permanent varieties,” and they are tempted to use this lengthy expression because they wish to imply an unsolved problem, which many couple with the single word “*species*. ”

A treatise on “*the origin of species*” necessarily presupposes the *actual existence* of species. Now, whatever may be the conflicting opinions as to the origin of species, *all* naturalists virtually agree, that a species is a subdivision of a genus, having some one, or more than one, permanent or persistent distinction from all others of the same genus ; or that species is the lowest *permanent* class, which includes under one head all the varieties of closely allied individuals which have in common a persistent mark or sign of distinction from all other individuals.

The *how* any so-called genus, or species, or variety, or individual *originated*, manifestly cannot affect its actual existence ; nor its generic, specific, nor individual marks ; and so, of course, must be an after consideration. But according to Darwin and some others who use the expression “*permanent variety*” synonymously with “*species*,” if a race of men were, by *any* means, to appear, having any distinctive

and persistent mark,—as, for instance, a race of green or purple men, whose unmixed offspring were persistently green or purple, then this peculiar race would be entitled to be denominated a (*well-marked and “permanent variety,”*) that is to say,) species.

The same remarks are plainly applicable to any three-fingered, seven-toed, or short-tailed race of beings, having the intelligence, articulate language, and other characteristics of the universally recognized (genus? or family?) *Homo*.

We repeat, whatever may be the conflicting opinions as to *origin* of species, *all* naturalists virtually agree that species is a subdivision of a genus, having some one or more than one permanent or persistent distinction from all others of the same genus; or that species is the lowest persistent class which includes under one head all the varieties of closely allied individuals, which have in common any persistent mark or sign of distinction from all other individuals.

Now if this be correct (and we doubt it not), then, of course, any distinct and persistent mark by which any race of Indians may be distinguished from all other Indian races, entitles them to be classified as a distinct species of Indians.

So also we discover distinct species of whites and blacks. But all the species of whites have in common some one, or more than one, persistent distinction from all the species of Indians and of Negroes; so that the word genus (if not some higher classification) is necessary to distinctly classify all white races together; making at least three distinct genera (?) of the “Family” (?)—or “order” (?)—*Homo*.

TRANSLATIONS.

ART. I.—THE ACTION OF ALCOHOL, ANÆSTHETICS, AND THE CARBONIC GASES UPON THE CEREBRO-SPINAL NERVOUS SYSTEM.

M. Lallemand read the following memoir containing his own views and those of MM. Perrin and Duroy upon the comparative action of alcohol, anæsthetics, and the carbonic gases, on the cerebro-spinal nervous system :

“ When etherization was first discovered Flourens demonstrated that there are successive stages in the action of sulphuric ether and of chloroform upon the nervous centres, and that the sensibility and motive power of the spinal marrow are abolished by both of these agents. In repeating the experiments of Flourens we have studied the action of these substances in the same manner, and we have ascertained that while alcohol and amylene, like ether and chloroform, abolish the sensibility and motive power of the spinal cord, the inhalation of carbonic acid and carbonic oxide allows these properties to be retained up to the moment of death in animals subjected to the influence of the two gases.

Action of Alcohol and Anæsthetic Agents.—Into the stomach of a dog of middle size we introduced 100 grammes of alcohol, at twenty-one degrees, diluted with an equal quantity of water, in three doses at intervals of fifteen minutes. One minute after the administration of the first dose the animal was in a state of complete intoxication. The limbs were flaccid, the skin had lost its sensitiveness, as had also the ball of the eye ; the pupils were dilated, the pulsations of the crural artery were 120, and the acts of respiration 22 in a minute. The posterior arches of the last three dorsal vertebræ were then elevated, and the spinal marrow was laid bare to the extent of about twenty-five centimetres. The posterior and anterior columns were pierced, and the posterior and anterior roots of a spinal nerve were seized and drawn out with the forceps. No sign of sensibility was elicited, and not the slightest muscular action. Four hours after the operation this lethargic condition gradually passed

off; the tongue and jaws of the animal began to move, and the eyelids closed when the balls of the eyes were touched. Upon piercing the cord again the animal uttered moans, and the hinder limbs were convulsed. The dog was then strangled."

Experiments with chloroform, sulphuric ether and amylen, from which analogous results were obtained, are next described, after which the authors of the memoir continued as follows :

" Thus the action of alcohol, chloroform, ether and amylen completely interrupts the sensibility and motive power of the spinal cord and nerves. We have also ascertained that by passing an electric current through the spinal marrow, when its action is thus suspended, its excitability may be aroused, and may be manifested by muscular action. We would add that the interrupted properties of the cord and nerves will reappear upon the cessation of the disturbing influence of the agents that have been administered.

Action of the Carbonic Gases—Carbonic Acid.—The posterior arches of the last two dorsal vertebræ of a large dog were removed, and the cord exposed to the extent of about three decimetres. The animal was then made to inhale carbonic acid mixed with a very small quantity of water. At the end of ten minutes it was entirely insensible and motionless, and the arterial blood had assumed the dark venous hue. The posterior columns of the cord and the posterior root of one of the nerves were then pierced with a pointed instrument, without producing any manifestation of feeling; but by puncturing the anterior root and the anterior columns, violent agitation of the hinder limbs was occasioned. The sciatic nerve being exposed and irritated, convulsive motions were excited in the muscles of the limb to which it was distributed. The muscular contractions produced by irritating the cord and nerves grew more and more feeble, but did not entirely cease until the animal expired."

Another experiment in which the oxide of carbon was used, gave results similar to those just described.

The preceding facts allow a very distinct line of demarkation to be drawn between alcohol and the anaesthetic agents—chloroform, ether and amylen on the one side, and the carbonic gases on the other—with respect to their physiological action.

I. Alcohol, chloroform, ether and amylene act primarily and directly on the nervous centres, in the substances of which they may accumulate.

II. The carbonic gases exert their primary and special influence on the blood ; carbonic acid imparting the venous hue to the arterial blood, and carbonic oxide altering the condition and physiological properties of the blood corpuscles.

It seems difficult not to admit that the insensibility produced by the inhalation of these gases is merely the secondary and consecutive effect of an alteration of the blood. It is known, in fact, that innervation is accomplished only under the physiological condition of the excitement of the nervous system by the blood ; and it is also known that when the blood cannot obtain a due supply of oxygen—as in asphyxia produced by a mechanical obstacle to respiration, or in croup—an anaesthetic condition supervenes, betokening imminent danger, and, indeed, the speedy extinction of life.

Anæsthetic agents, then, depress the functions of the nervous system, and by their progressive action suspend the respiration ; which is under the control of the medulla oblongata. They produce anæsthesia primarily, and asphyxia secondarily or indirectly.

Carbonic acid and carbonic oxide, on the other hand, modify the properties of the blood,—disqualify it for sustaining innervation, and thus produce asphyxia primarily, and anæsthesia secondarily or indirectly.

Conclusions.—1. Alcohol, chloroform, ether and amylene act immediately upon the nervous system.

2. Carbonic acid and carbonic oxide act immediately upon the blood by modifying its properties ; and it is by means of this modification of the blood that they produce insensibility. These substances then are only *pseudo-anæsthetics*.—*Journal des Connaissances Médicales.*

S. C. C.

ART. II.—CHEMICAL AND ELECTROLYTIC MEANS FOR DETECTING THE PRESENCE OF MERCURY, ESPECIALLY IN ANIMAL SUBSTANCES.

BY F. C. SCHNEIDER.

(From Proceedings of the Royal Academy of Sciences, Vienna.)

Many physicians and chemists have occupied themselves with the question as to the way mercury, after its use as a medicine, leaves the system, and whether it is eliminated by the kidneys. Schneider seizing the problem, begins by seeking the most sensitive reagents to detect the presence of mercury, this being given in the form of the protoxide or protochloride.

Sulphuretted hydrogen, sulphhydrate of ammonia, ammonia, and protochloride of tin, have particularly claimed his attention, and among these the preference is given to sulphuretted hydrogen. By saturating the liquid with sulphuretted hydrogen, precipitates have been obtained, after a little while, with—

Gr. 0.002 Hg Cl. in 100 cc. water.			
0.005	"	500	"
0.010	"	1500	"
1.016	"	2000	"
2.020	"	4000	"

This reaction loses much of its sensibility when mercury is to be discovered in urine; we cannot even detect it there when it is in less quantity than 0.100 grammes.

To discover mercury in animal substances it is also proposed to destroy these first by chlorate of potassa and chlorhydric acid, to evaporate to dryness and then exhaust the residuum (which should contain all the mercury in the condition of protochloride) by ether. The author is satisfied that by operating in this way only negative results are obtained, even when notable quantities of mercury are present, because the chloride of mercury is always found in the urine, combined with alkaline chlorides—combinations insoluble in ether. Even if one were to remedy this inconvenience by replacing ether with alcohol, the proceeding would present no advantage.

Schneider adopts the following as the more sure and delicate method for detecting small quantities of mercury: The liquid to be assayed is traversed by a galvanic current from a battery, composed of 6 pairs Smee's elements. The positive electrode is formed by a strip of platinum 4 centimetres long and 1 broad; a gold wire 1 millimetre thick, terminating in an increase of thickness to 2 millimetres, is employed as the negative electrode.

To assure oneself after the experiment that the gold has been amalgamated, it is introduced into a tube of glass drawn out to a capillary form at one end, the larger end being sealed at the lamp, after its introduction. The large end of the tube, containing the metal, is then heated to redness, and if any traces of sublimed mercury appear, they are made to pass into the capillary portion. This being done the tube is then drawn out over a lamp, so as to preserve at the end of the capillary tube a portion of the large tube. A small quantity of iodine is now introduced, and where the mercury is deposited it will be remarked that the vapors of the iodine disappear—yellow rings ($Hg_4 I_3$) or red rings ($Hg I$) will be formed capable of sublimation.

This method admits of the detection of 0.001 gr. of $Hg Cl$. in 500cc. of water; in this case the amalgamation at the negative electrode is not visible to the naked eye, and it is only by its transformation into $Hg I$, that the presence of the mercury becomes manifest. The amalgamation of the gold only becomes visible when we operate on 0.005 gr. of $Hg Cl$. in solution with 1500cc. of acidulated water. Corrosive sublimate is a bad conductor of the current; iodide of mercury does not conduct at all. It is necessary, hence, always to acidulate the liquid when the quantity of sublimate in solution is small.

The method proposed by the author, although it may be the most rigorous for the qualitative detection of mercury, cannot, however, be applied in determining quantity. When the liquids submitted to electrolysis contain animal substances, the author advises that a little chlorate of potassa

and chlorhydric acid be added before concentrating, and not to push the concentration so far that the salts crystallize. Far from being advantageous, too great concentration offers grave inconveniences. If the liquid contains combinations of iodine, it is necessary to remove them by heating it, in a water bath, with sulphuric acid saturated with nitrous acid.

In employing the plan indicated in the examination of the urine, Schneider has found :

1. The urine of syphilitic persons never having followed a mercurial treatment contains no mercury.
2. The urine of persons, who had submitted some months previously to mercurial treatment, contains no longer any mercury.
3. During the internal administration of mercurial preparations, mercury is always found in the urine of the patients.
4. Some days after treatment the urine still contains mercury. Iodide of potassium, administered immediately after treatment, does not seem to favor the elimination of mercury.

In two cases of mercurial intoxication, the author recognized a considerable quantity of mercury in the urine; in one of the cases, the patient having died, Schneider found mercury in the brain and in the liver.—*Journal de Chémie et de Pharmacie.*

L. H. S.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

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- I. *A Practical Treatise on Enteric Fever; its Diagnosis and Treatment: Being an Analysis of One Hundred and Thirty Consecutive Cases, Derived from Private Practice, and Embracing a Partial History of the Disease in Virginia.* By JAMES E. REEVES, M. D. Philadelphia: J. B. Lippincott & Co. 1859—12mo. pp. 199.

We have looked over this work with considerable interest, especially as coming from a Virginia practitioner, who could depict disease as he finds it in country practice, just in the form most likely to be seen by the mass of readers, his brother practitioners. Dr. Reeves appears to observe well the phenomena before him, and to treat his cases with that nice judgement so indispensable in the successful management of continued fever. His chapters on symptoms and treatment are unexceptionably good ; beyond this he could not well go, for it was not in his power to make any researches into the hidden mysteries of this disease. He has indeed quoted from the investigations of others, but no observations of his either confirm or impair their accuracy.

There is little pretension to novelty in his paper, which we do not object to, for what his profession wants is matter that is reliable rather than new, truthful rather than startling. He tells us of reduced mortality under the milder system of treatment in vogue now, compared with former years. Among other remedies he speaks highly of the *Veratrum Viride*, considering it a most valuable agent in reducing excessive action of the heart, without any lowering of the vital powers. He combats an objection made to it as an abortive ; his own experience and that of his friends showing that it has no such tendency. We do not doubt the general accuracy of his position, but still it must be remembered that its action is sometimes violent and excessively depressing ; and

any remedy competent to act in this way must sometimes have this tendency by the very nature of things. Dr. Reeves appears to us to use purgatives almost too freely; or at least, more than we can venture to do in this form of continued fever. We find it proper in this city to use them very sparingly, if at all, though very gentle laxatives may be called for at some period in nearly every case.

We do not know if it is necessary to call attention to occasional carelessness of diction in a generally well written professional book, but we like propriety of language, and none the less because our own may be open to criticism. The opening sentence under the head of *Prodromata* is not well expressed. “The accession of enteric fever is quite different in different cases; some come on suddenly without any premonitions.” What comes on suddenly? The enteric fever; but some can only relate to cases, which makes an awkward sentence. We observe elsewhere such language as “most always;” now most, either as an adjective or an adverb, expresses the superlative, and, therefore, it will not bear connection with always. Such matters are mere trifles, which detract little or nothing from the value of the book; we know they are mere oversights, but we would like to see all medical works written with classic accuracy.

Is the change of term from *typhoid* to *enteric* fever, really advantageous? We are not so sure that it is. Our author quotes from Dr. Wood the following language:

“The name typhoid fever was given by Louis in ignorance of a part of the ground; for he did not know certainly that another fever existed which ought to be called typhus; and in this uncertainty he named it typhoid, so as to convey, at any rate, the idea of analogy, if not identity, with what had previously been called typhus. Now that the fact is recognized, that there are two wholly distinct diseases, it seems to me quite unphilosophical to give to one of them a name from its supposed resemblance to the other.”

Dr. Wood and our author prefer the term enteric, because “it merely indicates that the intestinal affection is characteristic, as in the case of small pox, which we name from the eruption.”

We do not think that all that is assumed in the above few lines can be reckoned among the absolute facts of medical, or pathological, science. We are not just ready to reject the expressive term *typhoid*, whether in relation to specific fever or in the low forms frequently presented by various fevers. When a writer or practitioner speaks of typhoid fever, or of a remittent fever, taking on the typhoid form, there is as little ambiguity in his terms as in any other in habitual use. A continued fever, having marked analogies with typhus, is, we think, very well designated as typhoid; a remittent fever, passing into a low form with certain characteristic symptoms, is just as well said to be taking on a typhoid form. The language is both expressive and intelligible. But it may lead to a confusion of ideas, says one. Perhaps so—but frequent changes of name, either in the nomenclature of diseases or remedies, are much more apt to produce confusion. Are there not very close analogies between typhus and typhoid fever? Do not respectable and competent observers still hold that they are but *varieties* of the same disease? If we could trust to the *dicta* of the majority of modern authorities, we should say that typhus and typhoid fevers were certainly distinct in symptoms and pathological changes, as well as in proceeding from different causes, but from looking over the records of a large number of cases, independent of opinions, we are not led to so positive a conclusion. We do not quote our own experience, for our acquaintance with *typhus gravior* is insufficient to draw deductions from, though we attend annually cases of that form of continued fever known as typhoid, or abdominal typhus. We draw for data upon more enlarged sources of information.

What are the broad marks of distinction in life and death between typhus and typhoid fevers?

It may be said that typhus is a contagious fever springing up usually among the poor, ill-fed and badly housed portion of the population, where there is a great deal of animal effluvium extant, to the exclusion of pure air. For the sake of scientific exactness, we prefer here to substitute the words of

high authority in place of our own:—"The most characteristic symptoms of typhus, are, along with fever, prostration of strength; a dark red or dusky hue of the countenance, with suffusion of the eyes; stupor; dark sordes about the tongue, teeth, &c.; constipation of the bowels in the earliest stage; the peculiar odor; the peculiar eruption; and the collapse of the last stage"—says Dr. Wood.

A summary of diagnostic marks given by the same author (for all of whose opinions and statements we have the most unfeigned respect, whether we agree with him or not,) is expressed as follows:

" Typhus fever less frequently commences insensibly than the enteric, and is upon the average of considerably shorter duration. Instead of the diarrhoea, or extraordinary susceptibility to the action of purgatives, which almost uniformly attends the latter disease, it is frequently accompanied with constipation; and when fecal discharges are obtained, they are usually darker and more offensive. But hemorrhage from the bowels, which is not unfrequent in the advanced stages of enteric fever, seldom occurs in typhus. In the latter complaints, epistaxis, at the commencement is less frequent; there is more stupor and a darker color of the face, more turbidness of the conjunctiva, and much greater debility. The eruption in typhus also differs from that in enteric fever. It generally commences earlier; is not elevated as the other; is less regularly round or oval; is of darker, more livid hue; does not so readily disappear under pressure, and is often unaffected by it; is much more abundant; does not appear in successive crops; and instead of being confined chiefly to the abdomen and chest, is found equally upon the extremities, probably still more on the back; and is often diffused over almost the whole body. There is sometimes, however, in typhus, an eruption of light red spots, easily removed by pressure, and closely resembling those of enteric fever; but they are mingled with the other kind over all parts of the surface, and not limited to the anterior part of the trunk. In typhus fever the abdomen is often flat, and perfectly free from tympanites, which is almost never the case in the enteric. The signs of consolidation of the posterior part of the lungs are much more frequently present in the former, and the dry sibilant rales

of bronchial inflammation in the latter. Enteric fever is of considerably longer duration than typhus. Dr. Jenner found the average duration of fatal cases of the former twenty-two days, of the latter fourteen. The urine, which according to Mr. G. W. Edwards is uniformly albuminous in the early stage of typhus, is so in the enteric only towards the close.

"The anatomical characters of the two diseases are very different. The peculiar disease of the glands of Peyer, and of the mesenteric glands, so constantly present in enteric fever, is never found in typhus, or so seldom, as to lead to the suspicion of some intermixture of diseases where it does occur. The spleen, too, is much less frequently enlarged and softened in the latter. Dr. Jenner states that the spots which appear in typhus during life, remain after death, while no traces of those of enteric fever are visible.

"There are points of difference also in the persons attacked, and the circumstances under which the diseases originate. Thus, enteric fever almost never attacks the old, who are very frequent victims of typhus. The former disease is endemic in various countries, arises here and there (sporadically) without any obvious cause, and if ever contagious, is very feebly and very rarely so; while typhus seldom occurs in isolated cases, is often long absent from countries where it occasionally prevails, is always contagious, and, often epidemic.

"Nevertheless, there are cases which cannot be clearly distinguished; and as before suggested, it is highly probable that the two diseases now and then exist conjointly."

It will be observed that the best distinctive marks given by a first rate authority are nearly all partial and conditional. It may be readily granted that typical cases can be shown of typhus and typhoid fevers, yet at the same time, among many cases there are ever to be found some of every intermediate character, linking extremes together. Every observer admits that there are cases which cannot be distinguished during life. If disease of Peyer's glands is the absolute proof of typhoid fever, and the absence of such disease, upon post mortem examination, where the symptoms during life led to uncertainty of diagnosis between typhoid and typhus, is absolute proof of typhus, then, indeed, there is no farther room for argument. A single pathological condition settles the ques-

tion. But it can be shown, from many authorities, that cases considered typhoid from all the predominant symptoms, fail to give the pathological proof, while cases, which are by the principal symptoms typhus, do present the pathological lesions considered proper to typhoid or enteric fever.

In a discussion recently held before the Royal Medical and Chirurgical Society upon a paper read by Dr. Henry Kennedy, of Dublin, going to show that typhus and typhoid fevers were varieties of the same disease, resulting from a common poison, Dr. Jenner made some interesting remarks sustaining the opposite view. Among other things, he said, that Dr. Bennett was once at the hospital with him, who pointing out a case said, laughingly, "Do you think you can tell from that eruption what the ulceration in the abdomen will be?" Dr. Jenner said he thought he could, and the case proving fatal his prediction was verified. "The condition of the intestine could in every case be predicted from the nature of the eruption." Now, undoubtedly, a very close and experienced observer, like Dr. Jenner, could tell with something approaching to certainty what the post mortem would exhibit; but there his prediction would be aided by the simple, well known, general fact, that the more profuse and profound the external eruption, the less marked will be the internal eruption, if such it may be called. Dr. Jenner went on to say subsequently:

"It was not generally believed, as Dr. Kennedy supposed, that typhoid fever was symptomatic of intestinal lesion. Many of the early cases which he (Dr. J.) published were designed to show that the fever and the lesion bore no relation in severity to each other. A patient might die of virulent small pox almost before the eruption appeared; and death might occur from the general disturbance in typhoid fever with very little intestinal lesion."

Dr. Wilks supported Dr. Jenner, contending that the two diseases were altogether distinct, but admitting occasional difficulties in diagnosis. "In either case, however, the post mortem appearances were decisive as to the nature of the disease. In some instances there was no doubt considerable

difficulty in deciding between typhus and typhoid fevers during life." Is it not a *petitio principii* to rest the decision upon the appearances exhibited post mortem?

Dr. Murchison spoke on the same side. After stating certain facts in support of his positions, he continued :

" Some persons imagined that if in a case of fever, diarrhoea appeared as a complication, it was necessarily typhoid ; and that the appearance of petechiae indicated the existence of typhus. There could be no greater mistake. Typhus fever was not unfrequently complicated with diarrhoea ; in the Crimea it was often complicated with dysentery ; but in no instance was typhus fever, so complicated, attended with ulceration of Peyer's glands, as proved after death. Petechial eruptions were not characteristic of typhus, but occurred in many diseases which were not idiopathic fevers, being entirely distinct from the true bulloid or mulberry rash in typhus fever. Dr. Kennedy had lately recorded a case in which he stated that the rash of typhoid fever was observed during life, but there was no ulceration of Peyer's patches after death. The description, however, which he gave of the eruption, was a description, not of the eruption of typhoid, but of typhus fever."

It is by this gentleman assumed that Dr. Kennedy did not know the difference between the two eruptions, and yet as he sees every variety of cases habitually, we must suppose that he is as competent to pronounce upon the character of an eruption as Dr. Murchison is. We will have occasion again to refer to this gentleman's manner of settling difficulties.

Taking Dr. Wood's enumeration of diagnostic symptoms, it does not assume that any of these are sufficient to prove more than *varieties* of the same fever ; and, in point of fact, the records of cases show a constant tendency of symptoms to interblend with, or to take the place of, each other. Prostration, stupor, and sordes are common to both forms ; constipation generally attends typhus, and diarrhoea typhoid ; but numerous exceptions are shown. Dr. Hartshorne reported a number of hospital cases of typhoid and typhus fevers, which he considers distinct diseases, and yet he candidly avows, after speaking of the peculiar lesions found

after typhoid fever, that, "this does not, of course, prove the enteric lesion to be the cause, or main feature, of the disease, nor interfere with the fact that in a number of true ship-fever cases, diarrhoea, tympanitis, and abdominal tenderness occurred."—(*Am. Journal Medical Sciences*, July 1849, p. 66.)

We are told that hemorrhage from the bowels is sufficiently frequent in typhoid, but is rare in typhus. Dr. Kennedy says, on the other hand, he had noticed "the fact that intestinal hemorrhage was at least as common in typhus as in typhoid fever, contrary to what is usually thought." It must be admitted that this hemorrhage is common in both, even though of variable frequency.

The eruption in typhus is said to be darker and more livid, disappearing more slowly under pressure, or perhaps not disappearing. Dr. C. A. Lee, reporting a typhoid epidemic which occurred at London and Yorktown, says:

"The complexion, in cases of much severity, was considerably altered, sometimes of a dusky hue, at others, reddened, or slightly livid. The capillary vessels of the cheeks especially were much congested; occasionally the congestion extended to the chest and other parts of the body. The redness disappeared on pressure with the finger, returning with greater celerity in proportion to the brightness of the color, and less quickly in proportion to its duskiness or lividity, a fact first particularly noticed in this disease by Dr. Flint, showing, as he inferred, that the color is an indication of the degree in which the forces of the circulation residing in the capillary system are depressed."—*Am. Jour. Med. Sciences*, October 1859.

That enteric is of longer duration than typhus, and that albuminous urine is found late in the one and early in the other, are facts we may freely admit, while we cannot admit they prove anything more than that one variety of the disease is indicative of deeper blood poisoning, perhaps, than the other.

The analogies between the symptoms are beyond question. Now we may ask what are the revelations of morbid anatomy? Dr. Wood says:

"The anatomical character of the two diseases are very different. The peculiar disease of the glands of Peyer, and of the mesenteric glands, so constantly present in enteric fever, is never found in typhus, or so seldom as to lead to the suspicion of some intermixture of diseases when it does occur. The spleen, too, is much less frequently enlarged, and softened in the latter."

It is sufficient for our view that the spleen is enlarged and softened in both ; as to the abdominal lesions, we wish to insert a few words from the records of Dr. Sebert's (of Zurich) examinations, who from upwards of one thousand cases made one hundred dissections :

"As one-fifth of our author's recorded observations comprised cases in which the intestinal alterations failed entirely, were very trifling, or ended in resolution, bearing no relation to the severity of the disease, which severity bore also no relative connection to the typhoid diarrhoea, so he concludes that the distinction between abdominal typhus and exanthematous typhus without intestinal alteration, cannot be strictly defined ; much must still be left for future observers."—*Am. Jour. Medical Sciences*, October 1855.

Such a record as this is certainly significant.

It is asserted that typhoid is very feebly contagious—perhaps not at all so ; while typhus is contagious and epidemic. Most writers upon typhoid consider it contagious under circumstances favorable to contagion. We attended an immigrant a few years since, soon after landing, with an attack of moderate typhoid fever, from which he recovered before giving any great anxiety from the severity of his symptoms ; but a poor hard-working laundress, who took him in and nursed him, took the fever and had a long and most dangerous attack of the disease. There was no further extension of it. Now typhus requires also favorable circumstances to spread contagion. Dr. Hartshorne, in the report of cases before referred to, holds the following language :

"For many years instances considered to be of true typhus fever had occasionally occurred ; but never, unless in one individual, had it extended to others in the house. Nor did the character of active contagion display itself during this

epidemic, although, after a succession of cases had been for some months in the wards, a manifest prevalence, or *infection* was observed—affecting several patients entered for other complaints, the watchman of the house, who fell a victim to its violence, and myself, then resident physician.”

The difference in contagious properties is, at most, a matter of degree only. Dr. Murchison, whose views we promised to present, undertakes to settle all difficulties as to the distinction between the two diseases, typhus and pythogenic fever, as he calls it, by proving the simultaneus existence of two or more diseases originating in specific morbid poisons. He gives various instances to sustain his position, of which the following may serve as a specimen :

“ Illustration XLIX :—A female aged twenty-two had an attack of pythogenic fever which was attributed to the putrid emanations from a bad drain. She was admitted into the London Fever Hospital. The primary attack lasted three weeks. After a fortnight, she had a relapse, with a return of the ‘ rose-spots,’ and the day after this, there was a subcutaneous ‘ typhus mottling,’ along with drowsiness, heaviness, and other symptoms of typhus.”

The reader may put a different interpretation upon the facts, as well as upon the following which the same gentleman adduces :

“ Secondly, Illustration LVI :—M. Landouzy has given an account of a remarkable fever which prevailed in the gaol at Rheims, in the autumn of 1840. Many of the symptoms during life, including the eruption, were those of typhus, but the intestines after death presented the lesions characteristic of pythogenic fever. Now from the locality and the season of the year, one would have expected the latter ; and in addition to these causes, we are informed that there was a most disagreeable odor in the gaol. That the fever was really pythogenic was proved by the lesions after death. On the other hand, a cause was not wanting to account for the symptoms of typhus during life ; and it must be remembered, that a copious mulberry rash would entirely mark a few rose-colored spots, even if these were present. The circumstance to which the fever was mainly attributed was the overcrowding of the prisoners.”—*Ranking's Abs.*, Jan. 1860.

We think Dr. Murchison is disposed to force the facts to bear out his conclusions. It strikes us that in the last instance what might have been simple typhoid fever was converted into typhus, not by a different poison, but by an identical poison more concentrated.

From close attention to this matter for several years, we have been brought to the conclusion that there is no absolute dividing line between typhoid and typhus fevers; that we may indeed take typical specimens of both, and declare one to be typhoid because of the slow fever, the rose-colored eruption, the diarrhoea, the gurgling in the right iliac region, &c., while the other may safely be called typhus because of the predominating stupor, deep color and eruption, and constipation; but that from one specimen to the other there is every possible gradation of symptoms linking one with the other, there can be no reasonable doubt. The leopard, they say, cannot change his spots—but fever may.

We will here take a few words from Dr. Addison's experience as worthy of consideration :

“ The observations of Dr. Addison are of peculiar interest as they are the result of forty-four years experience of these diseases, during which interval he believes the characters of continued fever in London have undergone a series of very remarkable changes. The evidence, according to Dr. Addison, is all in favor of Dr. Jenner's distinctions of typhoid and typhus being different *species* of fever, and not mere varieties of one and the same disease. *But Dr. Addison has been so often astonished and deceived at the changes undergone by fevers, that he recommended his class, as yet, to receive the doctrines of Dr. Jenner as it were provisionally, in default of any more practical solution of the difficulty.*”

“ When the disease now known as typhoid first made its appearance in London, Dr. Addison stated that he and Dr. Bright often mistook it for measles; *but since then the so-called ‘rose spots’ have undergone an infinite variety of modifications.* ***. The pulse is not of any value as a diagnostic mark in either fever.”—*Braithwaite's Retrospect, July 1857.*

We have italicised a couple of passages, merely to draw more closely upon them the attention of the reader.

We have used freely such facts as came readily to hand to show why the proofs have not been sufficient to convince us of any absolute distinction between the two most marked varieties of continued fever. Perhaps we are too skeptical, but when the truth comes to us in an unequivocal form we are always ready to adopt it. We will receive all doctrines upon this subject as yet *provisionally*, though we are ever open to conviction. Meantime we shall not abandon the expressive term typhoid, while it appears to us to be as significant and intelligible as any other in medical language.
IN DUBIIS LIBERTAS!

Finally, we must commend the industry of Dr. Reeves in keeping notes of all his cases; if all our brethren, in city and country practice, were equally industrious, it would exercise a most wholesome influence over the sound intelligence and good reports of the whole profession.

R. McS.



II. *On Myalgia; Its Nature, Causes and Treatment; Being a Treatise on Painful and Other Affections of the Muscular System, Which Have Been Frequently Mistaken for Inflammatory, Hepatic, Uterine, Nervous, Spinal, or Other Diseases.* By THOMAS INMAN, M. D. (Lond.), Member of the Royal College of Physicians, London, Lecturer on the Principles and Practice of Medicine at the Liverpool Royal Infirmary School of Medicine, &c. &c. Second edition—London: John Churchill. 1860.—8vo., pp. 307.

We quote the full title to Dr. Inman's volume, although we feel that if it exercises the same effect upon our readers as it did upon us when it first met our eyes, it will be very apt to prejudice them against the work to which it relates. We dislike long titles on principle. They generally express so much as to leave little for the reader to find out in his perusal of the volumes to which they are prefixed, or else they are very likely to promise more than is fulfilled. We hope, however, that no such impression as we have men-

tioned may be made upon the minds of our readers by the title in question, and in order to counteract as far as possible any such tendency we deem it our duty, at the very outset of our notice to express the opinion that the volume before us is one of the most philosophical, truthful, independent and useful books which have been given to the profession for many a long day. The author is one who occupies a high position in the ranks of the profession as a bold and original thinker, one who, if he had written nothing more than his "*Foundation for a New Theory of Medicine*," would have been entitled to the thanks of physicians for having opened their eyes to the fallacious character of many of the principles by which they have been guided. But to return to the subject under consideration. Perhaps we cannot better convey a correct idea of the basis of Dr. Inman's volume than by quoting a few lines from the *Introduction*:

"Having had my notice directed both frequently and forcibly, of late, to certain painful affections of the muscular system, I venture to call the attention of the profession to the subject. I am the more desirous to do this as I have met with many cases where deplorable results have followed the non-recognition of the phenomena referred to, and, as I am not aware that any medical writer has treated of them systematically.

"The affections I allude to are particularly common—few persons, if indeed any, escaping them altogether.

"In the healthy individual they are spoken of under different names—cramp, spasm, stiffness, soreness, or aching. In the invalid they are always designated under the generic term of *pain*.

"In the former, it is so common an occurrence to be stiff, or sore, after exertion, that the phenomenon is never examined into—the connection between cause and effect is so clear that as soon as the one is felt inquiry is instituted into the other; and after a few years' experience even the schoolboy knows how to estimate the probable duration of his stiffness by comparing it with the muscular efforts he has made.

"In the weakly and invalid, on the contrary, when there does not appear to be any unusual exertion made the idea of soreness and cramp from muscular *fatigue* occupies no place; and even if it did, the difference of sensation arising from

similar causes in a strong man and a delicate woman, naturally leads the majority of persons to conclude that the soreness of one has nothing in common with the pain of the other. It is easy, therefore, to see how symptoms which are clear in the one may be obscure in the other.

“The pain complained of by the weakly girl is supposed to indicate nervous irritation, neuralgia, inflammation, indigestion or disease of some internal organ; and in the endeavour to cure it, the practitioner has too often treated it in a way to insure its continuance. There is scarcely any part of the body which is absolutely free from these affections, for they are to be met with wherever there are voluntary muscles or their tendinous prolongations. But there are some parts, however, which are more frequently attacked than others, the trunk more commonly than the extremities, the abdominal walls oftener than the thoracic, and the legs more constantly than the arms.”

Dr. Inman then proceeds to show that the tendinous structures are not incapable of being the seat of pain as is generally supposed, and proves very conclusively that they frequently, especially at their insertions, have very painful sensations located in them.

Several cases are given which have a general bearing upon the subject, and a number of circumstances giving rise to muscular pain are considered. The truth of the statements contained in the following quotation will be admitted by all who, like the author, have been exposed to the action of a like cause:

“Speaking from personal knowledge, I would say that if any one is desirous of knowing to what a pitch of severity this muscular pain will reach—if he wishes to know what is meant by the expression ‘a burning pain between the shoulders’—if he wishes to have an idea of how a pain may go on gradually increasing from hour to hour until it becomes positively unbearable, let him sit day after day for fourteen hours consecutively, working with the microscope, making specimens, taking notes, raising and lowering the head continually, and he will find that not even a new beauty of intense interest can keep him from his arm chair, the sofa or some other contrivance for supporting the head. He will experience relief as soon as ever the strain is removed from his muscles, and may resolve to turn again to his work—but

the old enemy soon attacks him ; he determines not to give way, but the *wearing* nature of the pain compels him once more to succumb. The spirit is willing but the flesh is weak. If a physician were once to become familiar in his own person with the nature of muscular or fibrous pain, he would readily recognize the great truthfulness with which it is described by his patients. He would never fall into the idea that the pain was due to fancy, hysteria, or the love of sympathy ; that it became unbearable simply from being thought upon, or could be mitigated by the notion that it had no real existence."

One of the most common causes of cramp and other muscular pains is debility, and Dr. Inman gives several interesting cases showing the effect of weakness in giving origin to obscure pains which eventually turned out to be muscular. The following case is so striking and so instructive that we are sure our readers will pardon us for quoting it in full :

" Mrs. T., aged 54, came under my care, suffering from bronchitis and asthma. She had been under medical treatment during thirteen years, and informed me that she had in addition to her other ailments enlargement of the liver and a tumor in the uterus. Her severest sufferings, however, arose from intense pain between the shoulders, and in the occipital region of the head ; it was, she said, for all the world as if somebody was burning her with a hot iron ; she had, too, pain in the loins and small of the back ; and, she added, suiting the action to the word, that there was a continued grasping pain all over the abdomen, as if somebody was always drawing her up, and so severe was this when she walked that she was often obliged to lay hold of the palisades in the street to draw herself up by and relieve the pain. Bed alone gave her a degree of ease, but her troubles pursued her there, for at every turn the abdominal muscles were drawn up into lumps on one side or the other. A severe nettle-rash for the last two years added to her suffering. Life was a burden to her ; during the day her wish was, 'Would to God it were evening,' and then 'Would to God it were morning.' She had a fixed idea that her case was hopeless and that she would die ere the year was out, and she was nothing loth.

" It was not until my third visit that I obtained all these particulars from the disinclination to talk of them, and some further time elapsed ere she spoke to me of the treatment that

had been adopted. She told me that she had been blistered on almost every part of the back and head, had had leeches to the nape and between the shoulders; that the abdomen had been covered with them in different batches. She had, she said, had blisters by dozens and leeches by hundreds; and that she had been kept low in consequence of the presumed disease of the liver. In fine, all the usual counter irritants had been used in abundant succession, whenever the pain became more than ordinarily severe or was more than usually complained of. On one occasion the uterus had been considered the seat of the mischief, and she had been examined with the speculum; and on some abnormal appearance being found around the os, it was thought her sufferings were due to uterine sympathy, and a wrong prognosis was given. By this time, however, I had seen sufficient of her habits to account for the majority of her symptoms. Originally a healthy woman from the country, she had married a gentleman who had a profound contempt for any lady who indulged in luxurious habits. She had ever afterwards acted as affection dictated, and sat erect without using any artificial support. As long as she was strong the exertion brought no suffering; but when menorrhagia, diarrhoea and the like had pulled her down, the muscles refused to do their work without pain. The bronchitis kept up debility; wine and other stimuli were not adequate to give the necessary strength, and she neither had the inclination, nor had she even been directed to give her muscles less work to do; the pulse was feeble, respiration gasping; there was frequent and distressing cough and an occasional expectoration of tenacious mucus; the appetite was poor, digestion bad, flatulence occurred nightly, and the bowels were torpid. There were the usual physical signs of bronchitis over the lower halves of both lungs, but percussion showed that the liver was natural in size, and it seemed possible that the supposed enlargement had been nothing more than a cramped state of the external oblique, on the right side.

"I ventured to assure her that all her pains were muscular, that they were to be cured by indulging in a greater amount of repose, and by a still further development of the strengthening plan of treatment.

"A sofa and comfortable arm chair were to be frequently used during the day; tea was to be eschewed; steel took the place of some of the wine; a mild expectorant relieved the cough; colchicum diminished the urticaria; cod-liver oil gave strength rapidly; and in less than a month the lady

was once more able to enjoy life and enter into its pleasures. A party of attached relatives who had come to condole with her, remained to congratulate. The pains and aches and spasms were all gone—the cough was all but well—and she who had previously risen at eleven and retired at eight, now rose at eight o'clock and retired at eleven. She has since had attacks of bronchitis, but the cramps in the abdominal walls have never returned."

A great many other cases as interesting and as full of point as this are stated, and then in chapter third we have rules given for the diagnosis of myalgia, among the chief being that there is no tenderness on firm pressure though sometimes there is superficial tenderness, that the pain is aggravated by exertion involving the muscle of which it is the seat, that it is an aching, wearing, burning, or sore pain—generally more severe in the morning, ceasing when the recumbent position in bed is assumed, and not being situated where there are many nerves. The following case showing the influence of leucorrhœa in causing myalgia, we quote without hesitation, particularly as it illustrates the method of examining such patients:

"The patient, a young woman aged about 22, of good color, healthy appearance, correct manners, complains of pain in the right side, at the same time spreading out her hand and covering the "pectoralis major" as nearly as she could :

Doctor (mapping out the pectoral muscle). That's the place, is it not? *Patient*. Yes. *D.* But you have pain elsewhere? *P.* No sir. *D.* Have you never pain here and here? &c. (touching successively the origins and insertions of the trapezius and other muscles of the upper part of the trunk, and pointing in his own person to the insertion of others). *P.* (wonderingly). Yes sir, I've had pains at all those places, but it is the worst here now (pointing to the right side as at first). *D.* Your right breast is very tender, is it not? *P.* Oh yes, very ; and sometimes there is a lump in it. *D.* I suppose it is sometimes so tender that you can hardly bear your stays on. *P.* Yes sir—I've been obliged to give them up for a long time. *D.* (slowly). Now try and remember ; are your pains the least troublesome on Monday or on Saturday? *P.* (briskly). I scarcely ever have them on Monday.

D. How long have you been a sufferer? *P.* For six weeks.
D. What business are you? *P.* An upholstress. *D.* What have you to do? *P.* To sew fringe to curtains, make up hangings, and so on. *D.* Has that been your business for a long time? *P.* Yes. *D.* What are your hours? *P.* From 8 A. M. to 6 P. M. *D.* Have you any time for dinner? *P.* Yes, an hour. *D.* What do you do then? *P.* Take a walk. *D.* Have you any cough? *P.* No. *D.* Have you ever spat blood? *P.* No. *D.* Or got thinner lately? *P.* No. *D.* Have you a good appetite? *P.* Pretty fair. *D.* Are your parents healthy? *P.* Why, they are not to say ill, but they are not very strong. *D.* Have you indigestion? *P.* No. *D.* Are you regular? *P.* Yes. *D.* Do you lose much blood? *P.* No. *D.* Do you suffer from piles? *P.* No. *D.* Do you sweat much at night? *P.* Not much. *D.* Now tell me, have you not a good deal of pain here? (touching the sacrum). *P.* Yes, sir. *D.* And you suffer a great deal from whites do you not? *P.* (with rather open eyes). Yes, sir; and they weaken me very much indeed. *D.* One more question: You have had them for two months or thereabouts? *P.* Yes, sir; and I never had them before.

"The influence such a dialogue has upon the patient may be readily conceived, and the fidelity with which the directions will be carried out may be relied on. In the case of which the above is an absolutely faithful outline, I recommended the patient to sit daily in a wash-hand basin, with some cold water in it, so as to ensure a purely local cold bath; an astringent injection if necessary, rest at the dinner hour instead of walking, as generous diet as could be afforded, and steel was to be taken as a tonic. If these things were assiduously employed, I ventured to promise a cure in about three weeks. My patient called occasionally to report progress, and stated that she was perfectly well at the end of a month."

We commend this case to the attention of those who, seeing in all pain either inflammation, neuralgia, rheumatism, or hysteria, have recourse to cups, leeches, blisters, plasters, liniments, and the like. Every physician must have met with cases like the foregoing, and many, perhaps, have wondered why they did not yield to the active measures employed. How many an overworked or leucorrhæal girl drags out a miserable existence because she can obtain no relief from the distressing pains which are breaking her down, and which

are aggravated because they are treated as if they were phthisical, or pleuritic, or rheumatic, or something else equally far distant!

We should like to follow Dr. Inman farther through his interesting and important volume, but we must refrain from so doing. We consider that he has rendered a service to the profession which can hardly be overestimated, and which the members should strive to repay by reflecting and acting upon the wise precepts and truthful examples which he sets forth. Books like his are landmarks in medical literature—happily every day becoming more frequent, and destined, we hope, eventually to line the road which leads to certainty in the principles and practice of medicine.

W. A. H.



III. *Glycerine and Cod-Liver Oil—Their History, Introduction, &c.* By W. BURNHAM WILLMOTT. London: H. Baillière. 1860.

We have in this work a *résumé* of the history, introduction, and therapeutic value of glycerine and cod-liver oil—two remedies which have occupied a large share of the attention of the medical world.

In Part I, we have an account of glycerine from its discovery by Scheele in 1789, until in 1813 when Chevreul announced the fact that fats were true chemical salts, of which glycerine is the base,—the view now so generally received. We have also the chemical composition of stearin, margarin and olein—and the best methods for obtaining stearic, margaric and oleic acids.

The author then gives an account of the mode of obtaining glycerine by the process of lead plaster making and lime saponification, and the means used in separating it from lead, earthy salts, &c. And then in an extract “from a paper read before the Society of Arts, by G. T. Wilson, Esq., F. R. S., on the Manufactures of Prices’ Patent Candle Com-

pany," we have a history of "fatty distillation and its attendant phenomena," from the time (1825) when Chevreul and Gay-Lussac conceived the idea of fatty distillation and the use of steam in the process; with an account of the patents of George Gwynne (1840), of Dubrunfant (1843), of W. C. Jones (1842), of Mr. T. Tilghman (1854), and of E. Price & Co. in 1854, by which process, patented by E. Price & Co., glycerine is obtained in a pure and nearly anhydrous state. The means used by this firm for decomposing the fat and separating the glycerine are *steam and heat*. We have also in the same extract an account of the process of sulphuric acid saponification, in which the glycerine is lost. After a description of the physical properties of glycerine, its transparency, want of color, syrupy consistence, sweet taste, and its great solvent powers, we have an account of its behavior with the acids of sulphur and phosphorus, water, alcohol, ether, and fatty bodies (with the two latter it does not combine); also, that glycerine, according to Berthelot, is analogous to the sugars, and may be converted by fermentation into alcohol and carbonic acid, and also into lactic or butyric acid. As a therapeutic agent, the author thinks, with great truth, that glycerine has been too highly extolled, and that as a solvent or excipient in pharmacy it will be found invaluable; in proof of which (on page 24) he gives an extract from the paper of M. Cap, published in the *Journal de Pharmacie et de Chémie*, April 1854.

In Diseases of the Ear—after reviewing the paper of Mr. Thomas Wakley, in the *Lancet*, June 16, 1849,—Mr. Willmott concludes that it acts merely by its unctuous quality upon the lining membrane of the meatus auditorius externus.

In Diseases of the Skin—quoting Drs. Troussseau and Bazin, but more especially M. Startin,—he finds glycerine valuable as "a local palliative."

In Diseases of the Eye, merely as an excipient for belladonna, as applied above the brow.

As a Substitute for Cod-Liver Oil in Phthisis—after quoting Dr. Crawcour, of New Orleans, in favor of it—he sets the

matter at rest ; proving fully by the report of Dr. Cotton, of Brompton, (*Medical Times and Gazette*, June 27, 1857), first, that glycerine has generally but little influence upon phthisical cases ; secondly, that as a remedial agent in consumption it will bear no comparison with cod-liver oil.

After an account of the gloinoine, its discovery in 1847 by M. Sobrero, the mode of its preparation from glycerine, the experiments of Drs. Fuller and Hailey, the conclusion that gloinoine is of no real value as a remedy and a very excessive poison, a description of the author's mode of preserving iodide of iron and all preparations of iron where it is in the state of a protoxide in glycerine he continues his article by a popular account of glycerine soap-jelly—the causes and mode of treatment of baldness—and concludes by a purely chemical description of glycerine, and a short burst of feeling upon “vitality,” “the essence of matter,” “the depths of nature,” and “the hidden wonders of creation.”

Part II.—*Cod-Liver Oil.*—We have here a history of this popular remedy from the early time when it was in high repute in Norway, Sweden and Germany, Holland and Great Britain, for the cure of gout and rheumatism ; of the experiments of Dr. Kay (1771), in the Manchester Infirmary, in the cure of rheumatism ; of Dr. Schenk, of Siegen (1822), until the time that Dr. Hughes Bennett introduced it into England as a remedy for phthisis.

We next have an account of the “source and mode of preparation” of cod-liver oil, the three varieties—*pale, light brown and brown*. The author inclining to the opinion that the pale oil, obtained from fresh livers, is preferable to Dr. DeYongh's light brown oil, and quotes the report of the Hospital for Consumption and Dr. Turnbull in support of his view ; although Dr. Hughes Bennett considered the light brown oil the most efficacious.

Dr. DeYongh's analysis of cod-liver oil is then given, by which it is seen to contain a number of ingredients besides the fatty acids, and an organic body called *gadin*. According to the analysis of Pereira all varieties contain 96 per ct.

of oleic and margaric acids and glycerine, and traces of iodine, bromine, &c. Light brown oil contains a *hundredth* more iodine than the others. Dr. DeYongh considers it "fair to assume that the brown oil owes its great power to the biliary matter and butyric acid, which exist in it in much larger proportions than in the light colored oils." (?) We have, according to Winckler, in cod-liver oil the fatty acids united with the oxide of *propyle* instead of glycerine. The analysis of Mr. Dugald Campbell, at the request of Dr. Theophilus Thompson, shows cod-liver oil to contain 20 per cent. more carbon and 20 per cent. less oxygen than other oils.

Mode of Action.—Some have attributed the efficacy of cod-liver oil to the iodine, some to the bromine and phosphoric compounds, and some to the bile it contains—but DeYongh maintains that "it is not to any separate principle, but to the combination of all, that we must look for an explanation of the various remarkable and curative effects of the remedy."

Dr. Hughes Bennett says "that the therapeutic action of cod-liver oil is dependent essentially on its being a fatty matter, perhaps more easily assimilated to the economy than any other kind of fat. To me it seems certain that in chronic rheumatism and tubercular diseases the albuminous compounds are in excess, and the only compounds are diminished in the economy. The direct addition of the latter, therefore, seems the most rational method of supplying the wants of the system."

Next we have a curious theory of the late Alfred Smee, Esq., F.R.S., in which electricity plays a part, which is very unintelligible. Dr. R. Craik attributes the good effect of cod-liver oil to its tonic and dietetic qualities, which Dr. E. Headlam Greenow denies, "because patients gain much more weight than that of the oil taken." Cod-liver oil, according to Liebig's theory, "furnishes carbonaceous fuel for respiration, and thus protects the tissues from the action of atmospheric oxygen." It will be recollectcd that cod-liver oil contains more carbon and less oxygen than the other oils.

Exhibition in Diseases.—To prove that cod-liver oil is a

valuable remedy in gout, rheumatism, rickets, serofulous disorders, cutaneous diseases, and more especially phthisis—a number of learned physicians are summoned. The author says, “cod-liver oil is *the* great remedy for pulmonary consumption.” After mentioning a number of methods for taking the oil, bitter infusions, emulsions, jellies, porter, wine, plain cold water (the best), the author gives a number of medical opinions as to the efficacy of cod-liver oil, *pro et con*, fully showing that great minds will differ upon some subjects. While Drs. Hughes Bennett, Andrew Wood, G. E. Day and others extol cod-liver oil as a *great* remedy—Dr. James Alderson says it is an oily food, not as good as fresh cream; M. Piorry tried it in many cases without *any* success; Dr. Billing remarks “that it is merely a fattening agent just as oil cake is to cattle,” and Mr. George Allarton audaciously asserts “cod-liver oil to be no more or less than a gross infatuation.”

We have given us next an account of the various tests of the purity of cod-liver, (none of which are considered by the author as perfect,) by saponification of the oil, digestion in alcohol, and the usual tests for iodine—sulphuric acid for the bile and the generation of *propylamine* on the addition of ammonia. The subject of cod-liver oil medicated with quinine, iodine, iron, mercury, arsenic, lead, and vegeto-alkaloids, is then introduced to us; and from what the author says, we are left to inquire what possible advantage is there in the mixture over the simples?

Dr. Hobbs, of Australia, has called attention to the curative value of the oil of the dugong, and Dr. Andrews, of West Malaren, to the oil of the pilchard, as substitutes for cod-liver oil, but their effects have not yet been fully ascertained.

“A third substitute has been recently tried, and according to the account given ‘bids fair to supersede cod-liver oil.’ The nature of this substitute has not transpired, but it appears to have been used with success in the case of a patient selected for trial from the London Hospital for Consumption.”

In June, 1859, in a paper laid before the Royal Medical and Chirurgical Society, by Dr. Theophilus Thompson, we have some “Observations on the Medical Administration of Ozonized Oils:”

“Oils are ozonized by saturation with oxygen and subsequent exposure to the sun’s rays for a considerable length of time. According to Dr. Thompson, the effect of such oils in consumptive cases is very marked. The power they possess in reducing the rapidity of the pulse and in contributing to the general health of the patient, renders them a valuable adjunct in the treatment of all chest affections.”

“Ozonized cod-liver oil, therefore, will shortly be introduced as an improved remedial agent.” J. S. G.

IV. *Chronic Alcoholic Intoxication.* By W. MARCET, M. D.,
F. R. S. London: John Churchill. 1860.

Whatever question there may be of the value of diluted alcohol as a therapeutic agent, when administered in moderate doses, there can be none as to its poisonous effects when used in excessive quantities, or of its deleterious properties when indulged in habitually in health. Its acute effects, so to speak, such as drunkenness and delirium tremens are, unfortunately, familiar objects to practitioners, and have been thoroughly studied for many years. But previous to the work of Magnus Huss of Stockholm, on Chronic Alcoholism, the results of whose investigations are given in the text-books, its chronic poisonous influence upon the nervous and muscular systems, together with its promotion of fatty degeneration of the heart, liver, &c., had been but little known. Now that the pathologist’s attention has been drawn to them, it seems surprising that men of science, and lovers of and searchers after truth, should have been satisfied with such superficial knowledge, and should not have examined more narrowly into phenomena which were daily exposed to their observation. Of late years, however, the microscope in investigating

pathological histology, has frequently demonstrated the presence of the glistening, variegated globules of fat; and animal chemistry has shown how alcohol multiplies them by absorbing the oxygen of the blood, leaving the other aliments, such as sugar and farinaceous substances, which have less affinity for it, to be transformed into fat.

As we shall presently see, the work in our hands is not of a scientific character calculated to throw light upon either the physiological or the pathological effects of alcohol upon the blood or the tissues, but it is written to describe the disturbances produced by it upon the nervous system, or rather upon the phenomena of innervation. It also dilates upon the efficacy of the oxide of zinc as almost a specific in their alleviation.

Dr. Marcket commences by pointing out the difference between that distressing form of mania known as delirium tremens, and what he calls, very appropriately, chronic alcoholic intoxication. The term intoxication has been of late years so limited in its application, that its true signification as indicating the decided influence of any toxic agent has been lost sight of, and we are glad to see it thus properly used.

Among the symptoms of chronic alcoholism our author calls attention to many which are frequently met with, such as tremulentia shown in the unsteadiness and awkwardness of the voluntary movements, the trembling of the hand in writing and eating, and in the gait somewhat resembling incipient chorea; the peculiar conscious look of depravity, which deters its victims from looking others in the face. The complexion is often of a diffused violet tinge and the features sharp, or inflated, are disfigured with acne rosacea. Prominent among these symptoms are inability to sleep, with great restlessness at night; the closing of the eyes producing extraordinary visions, often of a painful character; sleep, when obtained, being disturbed by frightful dreams, indicating a considerable degree of mental excitement. Giddiness and headache are generally complained of, amounting some-

times to inability to rise from the recumbent position. Hallucinations of a more subdued character than in delirium tremens, such as creeping insects, lamp-posts, mockings, &c.; fictitious perceptions of the sight, flying specks, variegated colors, &c.; great weakness, especially of the knees and hips, is given as the prevalent character of chronic alcoholism—this sometimes goes on to such an extent as to amount to partial temporary paralysis; difficulty of breathing, perceived in the throat, as a sensation of choking, entirely independent of any affection of the lungs. This is imputed to the frequent contact of alcoholic drinks with the glottis and epiglottis, and the consequent inflammation and tumefaction; an action, as is stated, somewhat similar, although in a mitigated form, to that of strong mineral acids, which have produced death in children from their irritation of the glottis and epiglottis. It is further suggested that this symptom may be from spasm, produced by reflex action from irritation of the pharynx.

Our author does not go into the analysis of these and other symptoms as we had hoped he would have done; yet, as a general rule when a case is met with, it can be easily placed in the proper category.

In his chapter on predisposing causes, we find discussed the quantity taken and the quality, together with the influence of sex, age, habits, &c.

As our readers are medical men who are proverbially fond of “the plant divine of rarest virtue,” we hope they will not be shocked that Dr. Marcet should place the use of tobacco prominent among the predisposing causes to alcoholic intoxication. It is singular how the two are often intimately associated, both scientifically and popularly.

Charles Lamb speaks of tobacco as the “sooty retainer to the vine,” “Bacchus’ black servant, negro fine,” again, as “brother of Bacchus, later born.” Most unfortunately for the influence of Dr. Marcet’s good moral advice to young men not to smoke, he speaks of its delightfully soothing influence in too glowing terms when he says:

"Tobacco smoking produces pleasurable sensations, like those resulting from the narcotism of opium, when the imagination changes each successive puff of smoke into every description of fanciful objects, when the bachelor forgets his solitude, the mind its troubles, and the body its pains. A painful impression on the mind is certainly soothed by smoking. One man will take to smoking to drown the disappointment of unsuccessful labors, and another to allay the affliction from the loss of a friend. It appears to possess the power of resting the mind when tired from much mental labor. Smoking appears to have the property of diminishing the power of mental abstraction; it is probably on this account that when the mind is haunted by some painful idea, the act of smoking assists the effort of the will to shake it off."

Such being its comforting, magical effect,* it is indeed tantalizing to be deprived of it by Dr. Marcket, who certainly might well be called the "sour physician."

In the next chapter our author speaks briefly of allied affections, which may be confounded with chronic alcoholism, such as disturbances of the nervous system, produced by long continued and excessive intellectual exertions and by sudden and violent emotions, chorea, hysteria, sequelæ of apoplexy, and the tremors from poisoning with lead or mercury. The diagnosis of such, however, is easily made.

Two-thirds of this volume of one hundred and seventy-two pages are devoted to the treatment. Scarcely second to total abstinence from alcoholic stimulants, our author places the oxide of zinc, indeed the book is written, he acknowledges in the preface, with a view of giving us its astonishing virtues. He administers it in one or two grain doses, repeated every three or four hours. Therapeutists will be surprised to hear that the oxide of zinc has "a very important and remarkable effect of producing sleep." We prefer giving in Dr. Marcket's own words his conclusions on this point:

* Who can wonder, then, at the poet's exclamation—

"For thy sake, Tobacco, I
Would do anything but die,
And but seek to extend my days
Long enough to sing thy praise."

C. Lamb's farewell to Tobacco.

"The usual effect of the oxide of zinc in simple cases of chronic alcoholism is—first, the sleep is improved, the patient does not lie so long awake at night, and the nightmare becomes less frightful ; then, the hallucinations decrease, the patient is no longer troubled with black specks passing constantly before his eyes, or with the sight of imaginary objects, such as insects or other animals crawling about the room, and extraordinary noises are no longer heard ; the attacks of trembling also diminish in frequency if not in intensity, and gradually pass off. This improvement is attended with an increase of appetite, as well as a marked diminution of the gastric symptoms ; and when the patient can take food and digest it well, he may be looked upon as in a fair way towards recovery. Gradually, muscular power returns, and the mental depression, which frequently accompanies chronic alcoholism, disappears ; the patient becomes cheerful and happy, and expresses with gratitude his joy at feeling well."

To substantiate his views, Dr. Marcket gives the details of a number of cases, in nearly all of which, however, there are other potent elements of treatment, such as entire abstinence from the poison itself, rest, regular diet and habits, together with occasionally quinine, iron, cod-liver oil, &c. We therefore cannot think that our author has exactly established the reputation of his remedy.

We have not forgotten that a few years since (1855) Dr. Marcket lauded this same salt of zinc as almost a specific for epilepsy, in accordance with Herpin's suggestion. He now admits that he was too sanguine in his conclusions, and that further observation has corrected and considerably modified them. Perhaps a further trial may lessen his confidence in this new application of his hobby. It ought, in justice to Dr. Marcket, to be stated that he has used with success the oxide of zinc upon patients suffering from chronic disorders of the nervous system, characterized by sleeplessness, tremblings, muscæ volitantes, and other symptoms resembling those met with in chronic alcoholism.—The profession can at least bring it to the searching test of experiment. F. D.

V. *On the Reparative Process in Human Tendons after Subcutaneous Division for the Cure of Deformities, &c., &c.*
By WILLIAM ADAMS, F. R. C. S., Surgeon to the Royal Orthopœdic and Great Northern Hospitals, Lecturer on Surgery at the Grosvenor Place School of Medicine, &c., &c. London: John Churchill. 1860. 8vo. pp. 175.

For several years Mr. Adams has been studying the subject to which the volume before us relates, and has published the results of his investigations from time to time in the Transactions of the Pathological, and Medical and Chirurgical Societies of London. The present volume contains not only the results of these researches, but also a full detail of the facts on which they were based, together with an appendix embracing the views of the principal surgeons of the world on the reparative process in tendons after division by subcutaneous and open wound. A series of lithographic plates is also added, which materially enhances the value of the work.

Mr. Adams agrees with Mr. Paget in his views relative to the process of reparation, except so far as regards the influence of the sheath of the tendon, which Mr. Adams thinks is never divided and rarely injured to any extent. The sheath he thinks serves the important purpose of maintaining a direct connection between the divided extremities. Mr. Adams is not so clear in this statement as he intends to be. He certainly does not mean to say that the sheath of the tendon is not at all divided, and yet this is what he does say. What he evidently means to say is that the sheath is not entirely divided, a portion—that in contact with the last part of the tendon cut through, being pushed before the knife. We infer this from the examination of plate VIII of his book, and from the consideration of the simple fact that it would be impossible to cut the tendon through, without at the same time dividing the sheath; and yet his language (on page 60) is apparently very plain when he says, "it evidently yields before the knife as the latter passes through the dense tendon."

Mr. Adams, as Surgeon for a period of several years to the Orthopædic Hospital, enjoyed the advantage of examining thirteen cases after death, in which subcutaneous section of tendons had been performed. The appearances are detailed with all necessary minuteness. Two and a quarter inches was the greatest length of new tendon which was formed.

The conclusions which Mr. Adams draws from this series of observations are briefly:

1. That tendon is one of the few structures of the body, such as true cellular tissue, nerve tissue, and blood vessels, capable of regeneration.
2. That new tendon of variable length is formed when the cut extremities are held apart by mechanical appliances.
3. That the reparative process commences by increased vascularity of all the parts in the vicinity of the cut extremities. Increased vascularity of the sheath is followed by the infiltration into its meshes of a blastematous material containing numerous small osseous nuclei. A few cells with granular contents or one or more nuclei, with minute oil molecules are also to be perceived. Inflammation retards the process of development. Capillary blood vessels are next formed, and the nuclei assume an elongate spindle or oat-shaped form, at the same time arranging themselves in parallel linear series.

Other conclusions are then given. We pass them over till we reach the sixth, which is to the effect that what elongation is required, must be obtained during the process of reparation, and not by immediate reunion and stretching of the newly formed substances.

The seventh of Mr. Adams' conclusions is, that the new tendon remains during life as a permanent integral portion of the tendon, the divided extremities of which it has been formed to re-unite. He therefore opposes the theory proposed by Mr. Tamplin, and supported by Messrs. Brodhurst and Coote, that contraction takes place until a linear cicatrix is formed.

In Part II a number of experiments are detailed which

were performed upon rabbits, and which illustrate the reparative process in these animals, after division of their tendons by subcutaneous section. These are exceedingly interesting, both in a physiological and surgical view.

An appendix contains a *résumé* of the English and foreign literature on the subject of Mr. Adams' labors, which, for those contemplating similar investigations, cannot fail to be of great value.

In conclusion, we must express our high appreciation of the character of Mr. Adams' researches. His memoir is another evidence of the fact that practical men are beginning to seek for scientific explanations of many things which they have been accustomed to regard as settled, upon evidence which when they come to look at it carefully, is perceived to possess but little claim to be considered reliable.

W. A. H.

VI. *The Eighteenth Annual Report of the Mount Hope Institution, near Baltimore, for the year 1860.* By WILLIAM H. STOKES, M. D.

The Report of the President and Directors of the Western Lunatic Asylum of Virginia, 1859-60.

The report of Dr. Stokes is something more than an exhibit of the number of patients received into the admirable Institution under his charge. It abounds in information which cannot be too widely distributed in the community, and the views expressed are such as show the author to be governed by those enlightened influences which fortunately so generally prevail in the management of the insane.

We say *generally*; we wish we could employ the word *uniformly*, but so long as many of our States are disgraced by the manner in which the insane poor are treated, we cannot shut our eyes to the fact. We can only regret that more enlightened legislation has not prevailed, and wonder how much longer men like Dr. Stokes will have to contend against ignorance, parsimony and their kindred qualities.

The following extract from Dr. Stokes' report will give our readers an idea of the operations of the Mount Hope Institution :

"On the 1st of January, 1860, there were in the house, one hundred and seventy-seven insane patients—seventy-one males, and one hundred and six females. During the year ending 1st of January, 1861, there were admitted one hundred and thirty-five—seventy-one males, and sixty-four females, making three hundred and twelve insane under care in the course of the year. In addition to this number of insane, there were thirty-four cases of *mania a potu*, making the entire number that has participated in the benefits of the Institution, three hundred and forty-six.

"There have been discharged one hundred and twenty-five insane—seventy males and fifty-five females, leaving on the 1st of January, 1861, one hundred and eighty-seven—seventy-two males and one hundred and fifteen females. The number of cases of *mania a potu* discharged was thirty-twenty-five males and five females, leaving still in the house four. The number of inmates altogether on the 1st of January, 1861, is thus seen to be one hundred and ninety-one.

"Of those discharged, fifty-three had recovered, forty-seven had improved, nine were unimproved, and sixteen died. The pathological states to which the deaths were attributable appeared to be as follows: To general paralysis, five; to phthisis pulmonalis, two; to acute mania with intense cerebral excitement, three; to exhaustive mania or febrile delirium, three; to organic disease of the heart and dropsy, one; to rupture of aneurism of aorta, one; to gastric ulcer with hæmatemesis, one."

The *Report of the President and Directors of the Western Lunatic Asylum* is principally in relation to legal and financial matters, and the report of the superintendent, Dr. Stribling, which forms a portion of it, contains no details as to the manner in which the Asylum is conducted.

We find that during the period commencing October 1st, 1859, and ending November 30th, 1860, four hundred and twenty-seven patients were received into the Institution. Of this number, three hundred and seventy-nine remained November 30th.

During the period as above, forty-eight were removed—

twenty-eight of these were cured, three were not relieved, and seventeen died.

Dr. Stribling regrets that a large number of applicants are annually refused admission on account of insufficient accommodation. He says :

"The question often comes to us, and from every section of the commonwealth, What is to be done with insane persons when they cannot be admitted into the asylums? The law (chapter 85, section 35) authorizes courts to contract for the maintenance, &c. of such persons out of the jails. Doubtless there are many now so confined, who might under this authority be relieved from the discomforts to which they are being subjected; but there are many others whose insanity is of a character to render them dangerous to the community or to themselves. The question recurs, What can be done with these?

"I once more express the opinion, that hospitals, constructed and organized with a special view to the comfort and cure of the insane, are the *only suitable* receptacles for them. Virginia is fully able to make such provision for *all* of this class within her borders; but if she *will* not, allow me to suggest that the attention of the legislature be called to the fact, that in many of the States laws exist which authorize the directors of lunatic asylums to send back *demented, harmless* patients to their respective places of residence, when necessary to make room for an applicant whose malady is of *recent origin* (and consequently deemed curable), or one who is so *violent and destructive* as to render confinement necessary."

SELECTIONS.

Notices of the Appearance of Syphilis in Scotland in the Last Years of the Fifteenth Century. By J. Y. SIMPSON, M. D. (Read before the Epidemiological Society, on Monday, November 5, 1860.)

Dr. Simpson's paper commenced by stating that medical men are for the most part agreed upon two points in relation to the history of syphilis—viz: that it is a species of disease which was unknown to the Greek, Roman and Arabian physicians; and that it first began to prevail in Europe in the latter years of the fifteenth century.

The non-existence of syphilis in ancient times, and the circumstance of its original appearance in Europe about the date alluded to, are opinions strongly borne out by two sets of facts. For, first, no definite account of this marked and extraordinary species of disease is to be found in the writings of any one of the ancient Greek or Roman physicians, historians, or poets; and, secondly, of the numerous authors whose works exist in the learned collections of Linsinus, Astruc, and Girtanner, and who saw and described the malady in the later years of the fifteenth or commencement of the sixteenth century, almost all comment upon it as (to use their own general expressions) "Morbus Novus," "Morbus Ignotus," etc., etc. It would not, however, said Dr. Simpson, affect our present object were we to consider the disease, as it appeared about the period in question, not to have been a new malady previously totally unknown, but merely, as some have thought, an aggravated form of a disease formerly existing in so mild a form as not to have attracted general observation. Dr. Simpson considered it unnecessary to his case to investigate the question of the probable source of the disease, and the exact date at which syphilis first burst forth in Europe. In relation to the object he had in view, it mattered not whether it sprung up spontaneously and endemically in Spain, Italy, or France, at the era in question, or was imported from Africa, as Gruner, Infessura and others allege; or from Hispaniola, as Astruc, Gir-

tanner, Wetherhead, and a host of authorities have stoutly, and not unsuccessfully, maintained. Nor was it necessary to discuss whether it first showed itself in 1493, as Sanchez and Hensler consider they have proved ; or in 1492, as Ful-gosi asserts ; or as early even as the month of October 1483, as Peter Pinctor, in 1500, proved astrologically to his own complete satisfaction that it ought at least to have done, inasmuch as that was, as he has sagaciously shown, the precise and exact date of the conjunction of Venus with Jupiter, Mars and Mercury, and the conjunction of these or other stars in the heavens above was, as he and many of the astrological physicians of his time believed, the origin of this new scourge on the earth below. Dr. Simpson started from the general proposition, that the disease was in 1494 and 1495 first distinctly recognised in Italy during the invasion of that country by the victorious army of Charles VIII, of France. The malady is generally allowed to have earliest broken out in a marked degree at Naples, about the time that Charles took possession of that city in the spring of 1495, or nearly two years after Columbus' return from his first voyage to Hispaniola. Charles set out again for France in May 1495, and the malady seems to have been both diffused by his infected troops along the line of their northward march, and afterwards carried to their respective houses by his own French soldiers, as well as by his various Swiss, German, and Flemish auxiliaries.

This new malady was not long in reaching Scotland, as attested by edicts issued in 1497 by the Town Council of Aberdeen, with reference to the appearance of the disease there ; and by the Privy Council in Scotland, in relation to its prevalence in Edinburgh. By the Aberdeen edict it was "stated and ordanit, that all licht weman be chargit and ordanit to decist fra thar vices and syne of venerie ;" and a few years later, "that diligent inquisition be taken of all infect personis with this strange *seikness of Nappeles.*"

The Edinburgh edict was six months later in date than the first of those issued by the Aberdeen authorities. It was, as already stated, drawn up by the King's Privy Council, and proceeds thus :—"It is our Soverane Lordis will, and the command of the Lordis of the Counseill, sent to the Prouest and Baillies within this Burgh, that this proclamation follow and be put into execution for the eschewing of the greit apperend danger of the infection of his Lieges fra a contagious sikkness callit the Grandgore," etc. "That is to say, we

charge straitlie and command that all manner of personis, being within the Fredome of this Burgh, quhilk are infectit or has been infectit and incur'd of this said contagious Plage callit the Grandgore, devoyd, red, and pass furth of this Town and compair upon the sandis of Leith, at ten houris before None, and thair sall have and synd Botis reddie in the Havin ordanit to thame be the officary of this Burgh redilie furneist with Victuales, to have thame to the *Inch*, and thare to remain quhill God provyde for thair Health." The edict further ordains, that those who take upon them the cure of the disease are also to pass with "infectit" to the *Inch*; and disobedience of the edict on the part of the doctor or his patient rendered both alike amenable to the penalty of being "brynt on the Cheik with the marking Irne, that they may be Kennit in time to Come."

At the time of the first appearance of syphilis in the northern realm, the throne of Scotland was occupied by James IV, a prince who was a great patron of the arts and sciences of his time. At different times we find him experimenting in chemistry, in physiology, and in medicine. His daily expense books contain many entries of purchases for instruments and materials to make the unmakeable "Quinta Essentia," or philosopher's stone; and he had laboratories for these investigations both at Edinburgh and Stirling.

King James practised the art of leech-craft, as well as experimented in alchemy and physiology. "He was," says Lindsay of Pitscottie, "well learned in the airt of medicine; and was ane singular good chirurgaine; and thair was none of that profession, if they had any dangeris cure in hand, bot would have craved his adwyse." The High Treasurer's account shows that the King had a right royal way in one important respect with his patients, that by it he might have secured a large consulting and private practice even in these modern days of high rivalry and competition; for he paid his patients, instead of being paid by them. Thus, in his daily expense book, under the date of April 14th, 1491, is the following entry:—"Item to Dominico, to gif ye king leve to lat him blud," 18 shillings Scotch; and a short time afterwards, "Item to Kynnard ye barbour, for twa teith draun furht his hed be ye king, xviii shillings." He seems also to have tried his hand at ocular surgery; but the following entry rather ominously hints that he was not a successful operator for cataract:—"Item giffin to ye blind wif yat had her ein schorne, xviii shillings." A prince imbued

with such medical and surgical propensities would naturally feel deeply interested in the first appearance within his realm of such a malady as syphilis; and in his treasurer's accounts there are several entries indicating that the king had bestowed monies upon various persons affected with this disease. Thus there are several entries between September 1497 and April 1498, for sums awarded to persons of both sexes afflicted with the "grant gore."

There are various sarcastic allusions to the disease by the Scottish poets of these early days, amply testifying to the fact of its rapid diffusion both among the *attachés* of the court (who were then the most common objects of poetical satire) and among the community at large. William Dunbar, the flower of the old Scottish poets, was at the period of the first introduction of syphilis, in 1497, in the prime of manhood; and in two or three years afterwards, viz., in 1500, was attached to the King and Court of James IV by an annual state pension. In a number of verses addressed to his patroness, the Queen—verses which strongly appear to us at the present day, with our existing standards of taste, as most unseemly and indecent—he commemorates the communication of the new disease, under the name of the "pockis" or the "Spanye pockis," to the Queen's men during the jollities of Eastern's E'en and the reign of the Abbot of Unreason; and he closes his stanzas with an earnest advice to all to—

"Bewar with that perillous play
That men callis libbing of the pockis."

The after effects and consequences of the disease he describes thus:—

"Sum, that war ryatous as rammis,
Ar now maad tame like ony lammis,
And sittin doune like scarye crockis,
And has forsakin all sic gammis,
As men ca' libbing of the pockis."

Gumbecht and Brandt, who wrote on syphilis in 1496, when speaking of the diffusion of the disease at that early date over Europe, both allude in very general terms to its having invaded France, Germany, etc., and reached as far as "Brittain."

But the earliest specific notice of syphilis in England, which Dr. Simpson remembered to have met with, is in 1502; and in this notice, the malady is spoken of under the name of "French pox." This notice is contained in the interesting Privy Purse Expense Book of Elizabeth of York, the Queen

of King Henry VII, edited by Sir Harris Nicholas. This charitable lady seems, from the records in question, to have had several *protégés* under her immediate care and keeping. Among these *protégés* is entered John Pertriche, "one of the sonnes of mad Beale."

There are various articles of expenditure successively noted in the Queen's private expense book as lavished upon this John Pertriche during the currency of 1502, as "monies for his dyetts," for "buying shirts," "shoyn," "hosyn," etc. There are twenty pence expended for his "learnyng;" and the last two items in the account record attempts of two different and rather opposite kinds to amend the mental and moral deficiencies of this hopeful youth. The two ultimate items are:—"For a prymere and saulter book (to John) xx pence;" and "Paid to a surgeon which healed him of the French pox, xx shillings."

In the second division of his paper, Dr. Simpson observed that the preceding notices, however brief and imperfect, relative to the first introduction and dissemination of syphilis in this country, were not simply matters calculated to gratify mere antiquarian curiosity. They appeared to him to be capable of a much higher application; for they offered so many elements tending to illustrate the general history of the first appearance of syphilis in Europe, and justify us in drawing from the data they afford several not uninteresting nor unimportant corollaries in regard to the first origin and mode of propagation of the disease, and the distinction of it from other affections with which it has been confounded.

I. These notices tend to corroborate the pathological opinion that syphilis was a species of disease new to Europe when it first excited the attention of physicians and historians in the last years of the fifteenth century. If syphilis was new in Britain in the end of the fifteenth century, this shows—

II. That it is a species of disease distinct and different alike—1, from gonorrhœa, and 2, from Greek leprosy (with both of which maladies it has occasionally been confounded); for both of these maladies existed and were abundantly recognized in this country long before the era of the introduction of syphilis.

III. As regards the mode or modes in which the disease was supposed to be so speedily propagated at its first appearance in Europe, the Aberdeen and Edinburg records are both interesting, though they offer very opposite testimony on this point.

For some time after syphilis broke out, it was believed, both by the medical and non-medical public, that the disease was communicable, and constantly communicated from the infected to the healthy, by the employment of the clothes, vessels, baths, etc., used by those already suffering from it, and by the slightest corporeal contact, or even by breathing the same air with them. One of the gravest articles of guilt brought against Cardinal Wolsey, when he was arraigned by the House of Lords in 1529, consisted in the allegation that, to quote the *ipsissima verba* of the indictment, as laid before Henry VIII., "Whereas your Grace is our sovereign lord and head, in whom standeth all the surety and wealth of this realm, the same lord cardinal, knowing himself to have the foul and contagious disease of the great pox broken out upon him in divers places of his body, came daily to your Grace, rowning in your ear, and blowing upon your most noble Grace with his perilous and infective breath, to the marvellous danger of your Highness, if God of His infinite goodness had not better provided for your Highness," etc.

For several years after the first outburst of the disease, sexual intercourse with the infected does not seem to have been suspected by any one as the source and means by which the syphilitic contagion was propagated; nor was the primary affection of the sexual organs generally noticed by the authors of these times as a constant or marked symptom. They were acquainted with and described only the secondary symptoms of the malady—the hideous eruptions on the skin, the ulcers of the throat; the exostoses and nocturnal pains in the bones; while they mostly all pass over the genital organs, as if they remained unaffected. So much was this the case, that we find Montagnana in 1498 recommending, not as a means of infection, but as a means of cure, *moderate coition* (*coitus temperatus*). Montagnana speaks of having recommended the treatment in question (*coitus temperatus*) to a sick bishop under his care; and perhaps we may venture to guess that such a prescription would neither be the most disagreeable medicine in the world to one who had taken upon him the vows of St. Benedict, nor the one least likely to extend Montagnana's practice among the same class of patients.

IV. The early notices (continued Dr. Simpson) adduced of the appearance of syphilis in Scotland are curious, as proofs of the rapidity with which the disease travelled, at its first outbreak, over the kingdoms of Europe. The new malady was,

as has already been stated, first distinctly recognized during the period that Charles VIII. of France occupied the city of Naples, or rather, immediately after he left that place. That Naples was the locality in which the contagion first spread so widely and rapidly as to be considered almost the source of the new epidemic; and further, that this happened at the precise date of the visit of the French army,—seems to be shown by the very designations respectively conferred at the time upon the new affection by the Neapolitans and French; for, while the French, as it is well known, designated it at its first commencement the Neapolitan disease, the Neapolitans, on the other hand, termed it the French disease. The army of Charles, in their march through Italy, arrived at Rome on December 4th, 1494, and entered Naples on February 21st, 1495; and, after remaining there three months, they evacuated the city on May 28th. On the 24th of the same month, the Spanish General Cordova landed in Sicily; on July 5th, the battle of Fuornove was fought; and next day King Ferdinand returned to Naples; but the last remnant of the French army did not reach France till the end of the following year. The Aberdeen edict, however, was issued within less than two years after Charles commenced his march homeward; or, to state the matter otherwise, Columbus arrived at Palos, in Andalusia, after his first voyage to the New World, on March 15th, 1493; and from his second voyage, in April 1496. The edict of the Aberdeen aldermen and council was passed on April 23d, 1497, or exactly four years and thirty-eight days from the date of Columbus' first return to Europe; while the famous edict of the Parisian authorities was issued on March 6th, 1497, only forty-eight days before that of Aberdeen.

The rapidity with which the disease spread from the south of Europe to its western confines has been often employed as an argument to show that the contagion of syphilis was propagated at its first introduction by laws different from those which now regulate its communication. In other words, it has often been alleged that the disease was then spread from kingdom to kingdom, and from city to city, by epidemic influence and by general contagion, and not merely by the slower medium of impure sexual connexion. When we look to the then existing state of society, both on the Continent and in our own country—to the loose manners and licentious lives—we shall probably find a sufficient solution of the at first sight difficult problem of the rapid dissemination of the

new malady. The morals of the general mass of the people are ever found to be regulated by the example set before them by the aristocracy and clergy. At the date of the introduction of syphilis into Europe, the notorious habits of the two latter ruling bodies were assuredly such as to expedite the diffusion of the new scourge that had sprung up among them ; and hence, at its first outbreak, we find the disease forcing itself upon several of the highest members of the Continental courts and church. The Emperor Charles V., Pope Alexander VI., kings and cardinals, princes and bishops, peers and priests, are recorded amongst its victims. As far as regarded the predisposing habits and influence of the clergy, at least, matters were not better in Britain than on the Continent, when the disease reached this country. There was openly inscribed over the door of Cardinal Wolsey's palace, "Domus Meretricium Domini Cardinalis." The manners of the inferior dignitaries of the church offered only too close an imitation of those of its primate. The commissioners appointed by Henry VIII. to visit the monasteries of England have recorded a sad and probably only a too true picture of the moral degeneracy of the great mass of the clergy of the time. With some few honorable and cheering exceptions, they found the occupants of most of the monasteries "following lives of degraded vice and licentiousness, instead of religious purity and exemplary rectitude." Accounts of their proceedings were transmitted by the visitor to the Vicar-General ; and they contained sufficient material to render the monasteries "completely infamous for their gross, absurd superstition, their shameful impositions, their abandoned, unnatural incontinency," etc. Clerical morals and manners were not in a much better state on the Scottish side of the border. Queen Mary would seem to have regarded the health of the high Roman Church dignitary who baptized her son James with considerable suspicion ; for she sent word to him to forbear to use the "spittle" on the occasion : "*she would not have a pokid priest to spit on her child's mouth.*" Very shortly before the commencement of syphilis, the dissolute manners of the English clergy, especially of the regulars, created such noise and commotion that Pope Innocent VIII. sent, in 1490, to Archbishop Merten, authorizing him to admonish his abbots and friars, "that, by their lewd and dissolute lives, they brought ruin upon their own souls, and set a bad example to others." When such was the scandalous life led by some of the clergy, we

cannot wonder (concluded Dr. Simpson) that, before the introduction of syphilis, Rabelais, himself at one time an ecclesiastic, should apply to gonorrhœa the very significant term of "rheume ecclesiastique;" or that, after the appearance of syphilis, this latter and greater malady should have spread speedily among all ranks, down from the clergy to the laity, and from the king to the church; and should have diffused itself by such stealthy and rapid steps over the countries of Europe as to have at first been mistaken for a malady spreading itself, *not* by impure intercourse, but by general epidemic influences.

CHRONICLE OF MEDICAL SCIENCE.

I.—ANATOMY AND PHYSIOLOGY.

1. *Critical and Experimental Researches on the Functions of the Brain.* By Dr. R. WAGNER. (Göttinger Nachrichten, 1860, No. 7; and Henle's Bericht über d. Fortschritte d. Medic., in 1859.)

R. Wagner infers, as well from his own researches on the weight of the brain of mentally-favored persons, as also from those of older authors, that the brains of intelligent individuals cannot be proved to be heavier than those of mentally less developed people. Wagner divides the brains into two groups, those poor in convolutions and those rich in convolutions, in order to appreciate the relation of the convolutions of the great hemispheres to the intellectual condition of the brains; he acknowledges, however, that this division is by no means a strict one, as the characters of the one group gradually pass over to those of the other. The author found great development of convolutions and great weight of brain often combined, but not always. Slight development of convolutions is more often met with in women than in men, the greatest degree of development was found only in men. The brains of some highly distinguished men, as that of Gauss,

the mathematician, exhibited, certainly, the greatest degree of development among all brains examined, but, on the other side, the brains of some very intelligent men were among those poor in convolutions.—*Br. and For. Med. Chir. Review.*

2. *The Physiology of Sleep.* By Dr. A. E. DURHAM. (Guy's Hospital Reports. Third Series, vol. vi. p. 149, 1860.)

Durham defines sleep, *psychologically*, as a state in which volition, sensation, and consciousness are suspended, but can be readily restored upon the application of some stimulus, and *physiologically*, as the period of the brain's repose, associated with the nutrition and repair of the brain substance. The author thinks that his experiments on dogs prove, that pressure of distended veins upon the brain, is not the cause of sleep, as has been supposed, but that during sleep the brain is in a comparatively bloodless condition; and that the blood in the encephalic vessels is not only diminished in quantity, but moves with diminished rapidity. The cerebral circulation during waking, when the quantity of blood and the rapidity of its motion are increased, Durham signifies as the circulation of function, that occurring during sleep as the circulation of nutrition, the former being favorable to endosmosis, the latter to exosmosis. The question regarding the proximate cause of sleep or of the temporary suspension of cerebral activity which follows each period of healthy mental exercise, the author is inclined to answer by assuming, from analogical facts, that the accumulation of the products of decomposition of brain tissue, caused by its functional activity, interferes with the continuance of its action.—*Br. and For. Med. Chir. Review.*

3. *On the alleged Sugar-forming Function of the Liver.* By Dr. PAVY. (Proceed. of the Roy. Soc., vol. x. p. 528, 1860.)

Pavy's recent communication to the Royal Society, on the alleged sugar-forming function of the liver, contains, besides a confirmation of the results of his former experiments,* some additional matter. Thus he shows by analysis, that although the blood collected from the right side of the heart after death, as was formerly done, affords an abundant indi-

* Conf. this Journal, No. 45, 1859; and No. 49, 1860.

cation of the presence of sugar, yet that when it is removed from the same part by catheterism during life, it is found to contain but a trace of the saccharine principle. Inferences, therefore, that have been drawn regarding the ante-mortem state, the author argues, from the post-mortem examinations, must be abandoned as erroneous. Pavy reminds us at the same time that slight causes, as disturbance of the respiration, are sufficient to induce a strongly diabetic urine; that therefore a fair specimen of blood from the right heart can only be obtained when the animal is in a quiet state during the performance of the catheterism.

Pavy's experiments on rabbits led to the same results as those previously performed on dogs,—viz: that injection of starchy and saccharine matter is followed by a great accumulation of hepatine (the sugar-forming substance of Bernard and others) in the liver. While sugar diffuses easily through animal membranes, hepatine has a very low power of diffusion. This opposition strengthens the author in his view that hepatine is not normally transformed into sugar in the living organism. Pavy finally communicates that after the introduction of large quantities of carbonate of soda into the blood lesions of the sympathetic system do not cause diabates. *Br. and For. Med. Chir. Review.*

II.—MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *Traumatic Tetanus cured by Tartarized Antimony in large doses.* (*Bulletin Général de Thérapeutique*, May 30th, 1860.)

The success which has attended the treatment of chorea by large doses of tartarized antimony (that is to say, by the strongest doses that the patient can bear without vomiting or diarrhœa) has induced Dr. Conway, of Neufchatel in Switzerland, to adopt this plan of treatment in traumatic tetanus; and he has succeeded in curing two patients by the administration of this medicine. The last case was that of a man, sixty-three years of age, who was seized with violent pain in the left hand, and particularly in the middle finger, which was affected with gangrene extending to its metacarpo-phalangeal articulation. In process of time the finger became dried up,

and was removed by gentle traction ; but very soon afterwards the patient complained of stiffness in the muscles of mastication, and it was remarked that he could not open his mouth. Dr. Conway immediately prescribed tartarized antimony in the dose of half a grain every hour and a half. The medicine caused severe alvine evacuations, but no vomiting until the next morning. The patient had still the same difficulty in opening his mouth, and complained besides of stiffness of the muscles of the nape of the neck. Two days after the attack, the trismus was extremely well marked, and the patient spoke only with difficulty. The tartarized antimony was now given more frequently—namely, half a grain every hour ; but still the symptoms were increased in intensity. The patient then experienced a slight amelioration of his complaint, the stiffness of the neck having diminished. On the other hand, the tartarized antimony had produced acute pain in the back of the mouth. Dr. Conway then ordered twenty-four pills, containing sixteen grains of tartarized antimony, one to be taken every hour and a half. The next day after this prescription the patient was still worse ; and as the constriction of the jaws did not allow him to swallow the pills any longer, he was ordered to take, every hour and a half, a teaspoonful of a solution of eight grains of tartarized antimony in sixty grammes of distilled water. It was necessary, however, to abandon this latter method of administering the drug, as it caused excessive pain in the back of the mouth, with singing in the ears, and a linctus with chlorate of potash was employed. The next day but one the tetanus still advanced, but the state of the mouth was improved under the use of the chlorate of potash, and the tartarized antimony was again administered every hour and a half, together with the chlorate of potash. This treatment was continued for seven days, after which time the patient complained of pain in the stomach, and the tartarized antimony was omitted ; but the tetanic symptoms diminished from this period, and it was not necessary again to have recourse to the medicine. The case is remarkable from the perseverance which was shown in the use of the tartarized antimony, and from the successful results which ensued from its combination with chlorate of potash, the latter salt appearing to modify the injurious effects of the tartar emetic, and enabling the patient to continue the antimonial treatment much longer than he would have been able to do without such an adjuvant.—*Br. and For. Med Chir. Review.*

2. A pathognomonic symptom of Scarlatina. By DR. BOUCHUT.

For some years past, Dr. Bouchut has been in the habit of pointing out in his wards a curious sign which assists in the discrimination of scarlatina from measles, erythema, erysipelas, etc. It consists in a vascular phenomenon, proportionate in intensity to the extreme contractility of the capillaries; we refer to the enduring *white stripe* produced at will by drawing the back of the nail over the part of the skin in which the eruption exists. Pressure with the nail, or any other hard substance upon the exanthematous surface, produces a white streak which lasts one or two minutes, and sometimes more. Figures may thus be traced upon the skin, the lines of which are conspicuous for their whiteness. With a blunt probe or pen-holder, the diagnosis of the disease may be distinctly inscribed on the integument, and after a minute or two the word *scarlatina* disappears, when the uniform tinge of the eruption again invades the written surface.*

This phenomenon is observable in scarlatina only. The scarlet hue of measles is not uniform, the eruption consisting of mottled patches, with very slight elevations separated by interstices of healthy skin. In measles the procedure we have described would produce an alternately red and white streak, enduring a much shorter time than in scarlatina. In erysipelas, in the redness induced by a mustard poultice, in solar erythema, the white line we allude to is not visible; and without attributing to this sign an undue degree of importance, it may be said to supply one more element in the determination of the character of the eruption of scarlatina.

Among the young patients in whom this symptom was noted this year, we observed one in whom scarlatina occasioned a delirium similar to that of meningitis, and who recovered, without any other prescription than mixtures with 2 ounces of syrup of mulberry. In this case, pressure with the finger left a distinct and lasting white line, especially on the second day of the eruption. The instances which place the fact beyond question, may now be numbered by hundreds, and the phenomenon invariably appears when the eruption is complete. It is, moreover, not a little singular that when the exanthema has faded, and the skin has resumed its natural rosy

*This sign is described by Borsieri, who does not, however, lay so much stress on its pathognomonic value.

hue, white lines may still be traced by friction with the finger, and last longer than on those parts of the skin to which the eruption did not extend.

Dr. Bouchut has sought for the cause of this phenomenon. How is it that in a cutaneous eruption, consequent upon universal capillary congestion, sudden and lasting discoloration can be induced by friction ! He considers this to be due to a considerable increase of the contractile power of the capillaries, proportionate to the intensity of the disease, the regularity of the eruption, and the amount of vital power. The capillaries contract, and expel their contents, hence the *white stripe of scarlatina*. This excessive tonic contractility of the blood-vessels is further remarkable inasmuch as it is peculiar to this disease ; once brought into play by pressure, the vascular contraction seems to last one or two minutes, a circumstance which does not occur in any other morbid condition.

3. *Perchloride of Iron in Diphtheria.*

M. Aubrun, in a communication to the *Academie des Sciences*, states that the greatest success has attended his administration of the perchloride of iron in diphtheria and croup. He gives the doses in rather a vague manner, stating that he adds from 20 to 40 drops of the solution of the perchloride—according to the severity of the disease and the age of the patient—to a glass of water, and causes the patient to take about two teaspoonful every five minutes during the day and every quarter-of-an hour during the night. Immediately after each dose of the perchloride, some cold milk, without sugar, is given. This treatment must be scrupulously followed for some days, without regard to the patient's sleep for the first three days. It is not until after the third day that the false membranes begin to soften and separate. The author considers that from 140 to 350 drops of the solution, representing from $1\frac{1}{2}$ to $4\frac{1}{2}$ drachms of the perchloride should be taken during each 24 hours ; and he carefully avoids giving any articles of diet likely to decompose it.—*Union Med.*, No. 146.

III.—SURGICAL PATHOLOGY AND OPERATIONS.

1. *Case of Ovariotomy.* By T. SPENCER WELLS, F.R.C.S.
Lecturer on Surgery, Surgeon to the Samaritan Hospital,
etc.

In accordance with the rule I have hitherto observed of bringing before the Profession the details of every case in which I may perform ovariotomy, the following is submitted to the readers of the *Medical Times and Gazette*. The last case recorded in this Journal was the nineteenth. It was published with others in the Number of August 25, 1860.

Case 20.—On February 29, 1860, I was requested by Mr. McCrea, of Islington, to see a patient residing in Barnsbury-park. She was 53 years of age, and was suffering from a very large ovarian cyst. The girth at the umbilicus was fifty-one inches, the measurement from symphysis pubis to ensiform cartilage thirty-one inches. She had been married twenty-six years, had had one child twenty-four years ago, none since, nor any miscarriages. The catamenia had been occasionally profuse, but had ceased three years ago. Her general health had been good until early in 1852, when swelling began low down on the right side, and gradually increased. She had no pain until the abdomen had acquired a considerable size in the Spring of 1853, when she consulted Dr. Ferguson, who advised her to wait as long as possible before being tapped. Increase had been very slow; but of late Mr. McCrea had attended her for some time, owing to increasing difficulty in getting about, from slowly increasing size of the abdomen. She had lost flesh, but had a good colour and cheerful aspect. Taking all the circumstances of the case into consideration, we determined to advise still further delay; not to interfere until the pressure of the fluid began to exercise some really injurious influence, and then to meet again.

On May 11, the fluid having increased, and as she was becoming much distressed by its pressure, it was agreed in consultation with Mr. McCrea that I should tap her. This was done, and fifty-six pints of clear viscid fluid removed. After tapping, some groups of smaller cysts were felt in the wall of the principal cyst; the largest being to the right side between the umbilicus and false ribs, and adhering there.

This we concluded to be sufficient indication against the injection of iodine. She was much relieved by the tapping, and remained in fair health during the summer, although the sac gradually refilled, and the smaller cysts grew faster in proportion than the large one filled. Towards the end of September she was nearly as large as before tapping, and another consultation was held, in which Mr. McCrea and I fully considered the arguments for and against ovariotomy,—the age of the patient, and the existence of adhesions on the one hand, and the hopelessness of mere tapping or iodine injection on the other—and after fairly putting the risk before the patient and her husband, it was determined that I should perform the

Operation.—Accordingly, on October 16, Dr. Cribb having administered chloroform, and Dr. Althus, Mr. McCrea, and Dr. Routh, kindly assisting me, I removed the cyst. Although the adhesion to the parietes were very extensive, and much firmer than in any case I had met with before where I had done more than make an exploratory incision, I was able to remove the whole through an incision only four inches long, midway between the umbilicus and symphysis pubis. A small portion of adhering omentum was detached; a long peduncle from the right side of the uterus easily secured; the left ovary examined and found healthy; the peritoneal cavity cleansed carefully from a little blood and viscid fluid from a cyst which had escaped into it; and the wound united by hare-lip pins passed through the whole thickness of the abdominal parietes, including the peritoneum, and by superficial wire sutures. As soon as the wound was closed, the clamp (which had been used to secure the peduncle temporarily) was removed, after the application of a ligature below it.

The Progress after Operation was very satisfactory. Mr. McCrea and Dr. Cribb carrying on the plan of treatment we agreed upon most assiduously. There was never much pain, though sickness was troublesome. Occasional enemas, containing twenty drops of laudanum, were given, and warm linseed poultices kept applied to the abdomen. The pulse varied from 96 to 112, and for some days there was considerable flatulent distension of the intestines. I removed the hare-lip pins on the 19th, when the wound was found to be accurately united. On the 21st the bowels acted freely, after an enema of warm water. On the 22d I removed all the superficial sutures. The ligatures were still firm on the

peduncle, and did not separate until the fourteenth day, namely October 30. When I saw her on November 2, she was eating and sleeping well, and walking about the room. I saw her again on the 23d, when she was quite well, and in excellent spirits, although she had been up the greater part of the night with her husband, who had been very ill. The cicatrix was quite firm, the appetite good, the bowels acted regularly, the urine passed naturally, and she was beginning to gain flesh. On the 26th she called, with Mr. McCrea, upon Dr. Ferguson, who was much gratified at the success.

The interesting features in this case are the age of the patient, the large size of the cyst, and the extreme firmness of the adhesions, which rendered the rapidity and completeness of the recovery really remarkable even to those who have been surprised at similar recoveries before under careful nursing and simple treatment.

The cyst was shown on the evening of the day it was removed, at the meeting of the Pathological Society. It consisted of one very large cyst, which had contained between forty and fifty pints of fluid, and of a number of groups of smaller cysts, growing in and from the walls of the principal cyst, and weighing about eight pounds.

This being the twentieth case, it may be well to state that the general result of my experience of ovariotomy since my first case in 1858, has been as follows:

12 in Hospital Practice,	8 recoveries	4 deaths.
8 in Private Practice,	5 "	3 "
—	—	—
20 cases	12 "	7 "
—	—	—

When it is remembered that many of the women who are now alive and in good health, were in an utterly hopeless condition, these facts are surely a sufficient answer to the question, "Is Ovariotomy Justifiable?" I may add, that a patient in her 43d year, from whom I removed a large ovarian tumour in October, 1859, was safely delivered of a child on the 2d of November, 1860, under the care of Mr. Ridsdale, of Euston-square. Mother and child have gone on well.

EDITORIAL AND MISCELLANEOUS.

A MEMORANDUM ON CHLOROFORM.

BY RICHARD M'SHERRY, M. D.

After speaking summarily of the dangers of using *chloroform*, Dr. Stillé in his recent work on Therapeutics and *Materia Medica*, holds the following language: "It must be admitted that the question whether its use as an anaesthetic should be persisted in is one of extreme gravity, and which it is more than probable, will ultimately be decided in the negative." The reviewer, (E. H. C.) of his work, in the July number of the *American Journal of the Medical Sciences*, says he heartily subscribes to this opinion.

A remedy so powerful as chloroform undoubtedly requires to be used with the highest degree of prudence, but with this prudence, and a pure article, (*e. g.* such as that prepared by Dr. Squibb,) the attendant risk does not seem to justify so unfavorable a view. In a fatal case recorded by Prof. W. A. Hammond, it was shown, upon analysis, that the chloroform used was very impure; and it may be, that more of the same kind was used in the cases related by Drs. Porter and Brewer, of the U. S. Army, in the February number of this Journal.

I have never seen a fatal result from its use; nor am I aware that any such has ever occurred in this city. Our practitioners do not generally recur to it upon trivial occasions, but those who do use it are not of Dr. Stillé's opinion. In justice to this gentleman, however, I may say that Prof. Smith, who has used it very extensively, seems more inclined to agree with Dr. Stillé; as, according to his experience, it predisposes to, and is very often followed by, undue secondary hemorrhages.

The testimony rendered by Velpeau, in its favor, is so striking that I feel impelled to lay it before the readers of this Journal. The article from which I make the following translation may be found in the *Annuaire Encyclopédique*, (Art. *Chirurgie*) published in Paris, May, 1860.

"When we remember the vast number of operations performed since 1847, in which chloroform has been administered, we must admit that the proportion of accidents is extremely small. As a general rule, the surgeon should avoid giving chloroform to a person in a sitting position, or in a close, ill-ventilated apartment. He should watch carefully over the pulse and the respiration; he should give it interruptedly, and with due caution. Accidents, when these conditions are observed, are so rare, that I have never yet witnessed one, although I have had recourse to etherization more than six thousand times in the last twelve years."

GARGLE FOR DIPHTHERIA.

Dr. L. Faulkner, of Mount Laurel, Halifax county, Virginia, writes us that he has found a gargle formed after the following prescription to be exceedingly efficacious in the treatment of diphtheria: Pyroligneous acid and water, equal parts; chlorate of potash, as much as will dissolve: honey enough to sweeten well; to be used two or three times a day. "In very bad cases, when the whole fauces are covered over with the diphtheritic exudation, I omit the water and only use a little more honey with the acid."

Dr. Faulkner advises the above in conjunction with "the excellent constitutional treatment now almost unanimously agreed upon."

As a local application we should think the above as good as any that have been proposed, and better than a great many of them.

Quarterly Record of Books Received.

- Chemistry in its Relations to Physiology and Pathology. By Geo. E. Day, M. D., &c.—London. H. Bailliere. 1860. (Reviewed in January number.)
- Manual of Auscultation and Percussion. Translated from the French of MM. Barth and Roger. By J. H. Pottenger, M. D. St. Louis. 1860. (Noticed in January number.)
- On the Diseases, Injuries and Malformations of the Rectum and Anus. By T. J. Ashton, Surgeon to the Blenheim Dispensary, &c.—Philadelphia. Blanchard and Lea. 1860. (Noticed in January number.)
- Memoranda Medica; or Note Book of Medical Principles, &c. &c. By Henry Hartshorne, M. D., Prof. of Theory and Practice of Medicine, in the Pennsylvania Medical College, Philadelphia, 1860. J. B. Lippincott & Co. (Noticed in January number.)
- The Diseases Peculiar to Women; Including Displacements of the Uterus. By Hugh L. Hodge, M. D., Prof. of Obstetrics and Diseases of Women and Children, in the University of Pennsylvania. Philadelphia. Blanchard and Lea. 1860. (Reviewed in February number.)
- The Surgical Diseases of Children. By J. Cooper Forster, M. D. F.R.C.S., &c. London. J. W. Parker and Son. 1860. (Reviewed in February number.)
- A Practical Treatise on the Diseases of the Lungs; Including the Principles of Physical Diagnosis. By W. H. Walshe, M. D. New American Edition. Philadelphia. Blanchard and Lea. 1860. (Reviewed in February number.)
- Anatomy of the Arteries of the Human Body, &c. By John Hatch Power, M. D. Dublin. Fannin and Co. 1860. (Noticed in February number.)
- The Pocket Anatomist Being a complete Description of the Human Body, for the use of Students. By M. W. Hilles. Philadelphia. Lindsay and Blackiston. 1860. (Noticed in February number.)
- On Myalgia; Its Nature, Causes, Treatment, &c. By Thomas Inman, M. D., &c. Second edition. London. John Churchill. 1860. (Reviewed in present number.)
- Glycerine and Cod-Liver Oil; Their History, Introduction, &c. By W. Burnham Willmott. London. H. Bailliere. 1860. (Reviewed in present number.)
- Chronic Alcoholic Intoxication. By W. Martet, M. D. F. R. S. London. John Churchill. 1860. (Reviewed in present number.)
- On the Reparative Process in Human Tendons. By Wm. Adams, F.R.C.S. London. John Churchill. 1860. (Reviewed in present number.)
- Report of the President and Directors of the Western Lunatic Asylum, for 1860.
- Eighteenth Annual Report of the Mount Hope Institution, for the year 1860. By William H Stokes, M. D. (Reviewed in present number.)
- The following Works have also come to hand, and will receive early attention.
- Researches on the Venom of the Rattlesnake. By S. Weir Mitchell, M. D. Washington City. 1861. Smithsonian publication.
- On Fractures and Other Injuries from Gunshot Wounds. By Dr. Lewis Strohmeyer, Dr. Friedrich Esmarch and S. F. Straham. London. Trübner and Co. 1860.
- Transactions of the American Medical Association, for 1860. Philadelphia. Blanchard and Lea. 1861.
- On Diphtheria. By Edward Headlam Greenhow. New York. Baillière Brothers. 1861.
- The Lives of Eminent American Physicians and Surgeons of the Nineteenth Century. Edited by Samuel D. Gross, M. D., Prof. of Surgery in the Jefferson Medical College. Philadelphia. Lindsay and Blackiston. 1861.
- Theory and Practice of the Movement, Cure, &c. By Charles Fayette Taylor, M. D. Philadelphia. Lindsay and Blackiston. 1861.
- Diphtheria; Its Nature and Treatment, &c. By Daniel Denison Slade, M. D. (Fiske Fund Prize Essay.) Philadelphia. Blanchard and Lea. 1861.
- A Practical Treatise on the Aetiology, Pathology and Treatment of Congenital Malformations of the Rectum and Anus. By William Bodenhamer, M. D. New York. Samuel S. and William Word. 1861.
- Lectures on the Diagnosis and Treatment of the Principal Forms of Paralysis of the Lower Extremities. By C. E. Brown-Sequard, M. D., &c. Philadelphia. J. B. Lippincott & Co. 1861.
- Course of Lectures on the Physiology and Pathology of the Central Nervous System. By C. E. Brown-Sequard, M. D., &c. Philadelphia. J. B. Lippincott & Co. 1861.
- A Hand Book of Hospital Practice, &c. By Robert D. Lyons. New York. Samuel S. and W. Wood. 1861.
- On Diabetes and Its Successful Treatment. By John M. Camplin, M. D. New York. Samuel S. and W. Wood. 1861.
- An Epitome of Surgery. By J. Beadnell Gill, M. D. London. H. Baillière. 1860.
- A Compendium of Human Histology. By C. Morel. Translated and edited by W. H. Van Buren, M. D., Prof. of General and Descriptive Anatomy, in the University of New York. New York. H. Baillière. 1861.
- La Medicine du Prophète traduit de l'arabe par M. Le Docteur Perron. 8vo. Paris. J. B. Baillière. 1860.
- The Signs and Diseases of Pregnancy. By F. H. Tanner, M. D. London. 1860.

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UNIVERSITY OF MARYLAND,

SCHOOL OF MEDICINE.

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THE
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New Series.

ORIGINAL COMMUNICATIONS.

ART. I.—ON THE OCCURRENCE OF AMYLOID BODIES IN THE BLOOD
OF PERSONS AFFECTED WITH EPILEPSY.

BY WILLIAM A. HAMMOND, M. D.,

Professor of Anatomy and Physiology in the University of Maryland.

The fact that amyloid substances are met with as normal constituents of the animal organism may be regarded as sufficiently well established. Several years since Schmidt pointed out the existence of cellulose in the mantle of certain of the tunicata, and not long afterward Gottlieb showed that paramylon was to be found in the body of the infusorium *euglena viridis*. This organism is not now considered as belonging to the animal series, but at the time Gottlieb made his discovery it was deemed important as tending to overthrow one of the distinctive tests relied on as separating plants from animals.

Subsequently other investigators took up the subject and Kölliker, Löwig, Schacht, Huxley, and Virchow, have definitely shown that starch or its analogues are present in the

animal body as constant and normal constituents, and the investigations of Sanson, Figuier, Bernard, and other physiologists have established the fact of the existence of glycogene in the liver, kidneys and other parts and organs of the body.

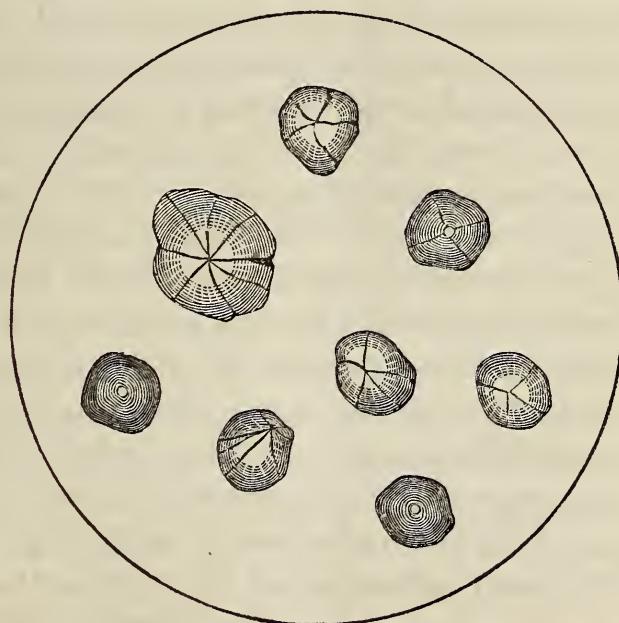
But besides the fact that amyloid substances occur normally in the human organism there is much evidence to show that parts of the body are liable to a peculiar degeneration, by which the healthy characters of the tissue are lost and a starchy substance takes its place.

Now it is to be understood that these amyloid matters are met with under two very distinct forms—first, as corpuscles of determinate shape, giving a blue color with iodine and a violet tint with iodine and sulphuric acid; second, as amorphous or granular matter constituting glycogene, and the substance present in waxy degeneration of the spleen and other organs. This last does not give a blue color with iodine alone, but when with the latter substance, sulphuric acid is added, a blue color is at once produced.

The present paper relates to the occurrence of the first of these—the amyloid bodies or corpuscles—in the blood of epileptics. The only instance heretofore recorded of the presence of these bodies in the blood of man, is that given by Mr. Stratford, of Toronto, C. W., in the *Quarterly Journal of Microscopical Science*, Vol. III, 1855, p. 168. In this instance the patient was affected with epilepsy, and Mr. Stratford, on examining the blood from his finger with the microscope, discovered numerous granules similar in form to starch. Subsequently these were tested with a watery solution of iodine and they were observed to assume a blue color when brought in contact with this liquid. Since I became acquainted with this case I have always examined the blood of the epileptics who have come under my charge in order to ascertain whether or not these amyloid corpuscles were really to be found in this fluid. I have, however, never met with them in many examinations, but in two instances. I have frequently, also, examined the blood and organs of the lower animals, and of the human subject dead from other diseases than epilepsy.

In these latter investigations I have frequently found the corpuscles in question in the liver, spleen, brain, prostate gland, kidneys and super-renal capsules, but never in the blood. The spleen of the terrapin appears to be a favorite location for them, and this organ in the frog often contains them.

The two cases above alluded to were men. The first was about 28 years of age, and had been affected with the *petit mal* for three months before he came under my observation. One evening he was taken to the hospital, having fallen down in a fit. This was the first time he had fallen. In all previous attacks he had only been deprived of consciousness for a few seconds, and there was no convulsive action beyond slight spasm of the muscles of the face. On the occasion in question loss of consciousness was complete, and there was a good deal of convulsive movement. The fit lasted about fifteen minutes. Whilst he was in the stupor I abstracted about a drachm of blood from his arm and submitted it to microscopical inspection. With a half-inch objective numerous bodies were perceived which I had no difficulty in recognizing as amyloid corpuscles. These are figured in the accompanying wood cut:



The appearance of these bodies scarcely left any doubt in regard to their true character, but in order to arrive at a positive conclusion I allowed a little watery solution of iodine to run under the cover glass, when immediately each corpuscle became of a deep blue color.

The examination was frequently repeated and always with a similar result. The bodies were by no means in small quantity. I had no difficulty in ascertaining that they were four or five times more numerous than the white corpuscles.

The following morning I again examined the blood and was very much surprised to find no amyloid corpuscles present, and what constituted a very singular fact in the progress of the case was that they were only found a few hours before and after a fit. From a great many examinations I ascertained that for a period of ten hours (four hours before and six hours after a fit) these bodies were present in the blood and at no other time. The man continued under my care for over six months.

The second case was that of a healthy man about 25 years of age, and of temperate habits. I saw him in his first fit. It was a very severe one, and on examining his blood, as in the preceding case, similar bodies were discovered in large quantity. They were, however, always to be found. This man remained under my charge for four months subsequently. At no time did I fail to find the amyloid corpuscles in his blood. In the intervals of the fits he was in perfectly good health.

These cases are certainly interesting. It is well known that irritation of the floor of the fourth ventricle interferes with the normal course of nutrition in such a manner as to cause the appearance of sugar in the urine, and it is possible the occurrence of amyloid bodies in the blood of epileptics may also be due to a similar cause, dependent upon an irritation in some other part of the cerebro-spinal system. This point can, however, only be definitely settled by post mortem examination of the human subject in whom these corpuscles have been observed as attendant on epilepsy, or by a well devised series of experiments upon the lower animals.

ART. II.—EXTRACT FROM THE SANITARY REPORT TO THE SURGEON GENERAL,

BY SURGEON C. S. TRIPLER, M. D., U. S. ARMY,

For the quarter ending December 31, 1860.

Among the recruits (four hundred in number at present, several large detachments having been sent off,) we have had more cases of venereal disease than usual—eleven of gonorrhœa and eight of chancre—most of them aggravated cases. All these men have been returned to duty or are convalescent.

The gonorrhœa has yielded to strict confinement to bed; saline purgatives in the first instance; the local use of cold water; injections of acetate of zinc, subnitrate of bismuth, perchloride and persulphate of iron. In a few cases the balsam of copaiva has been used. I am very much disposed to think, the more I see of these cases, the principles of treatment do not differ from those of any other inflammation of a mucous membrane, though they may be admitted to be due to a specific cause; that rest throughout, local depletion, sedation and evaporants in the early stages, and such local applications as are known to restrain undue secretion from the mucous membranes in the subsequent stages, will be found all sufficient in the great majority of cases. Sometimes, I admit, I have been compelled to resort to a mercurial alterative, from the obstinacy of the cases. It is possible a chancre may have existed in the urethra in these instances—I do not know the fact; I do know, however, that no secondary symptoms have occurred in any of these cases while they have remained under my observation. The mercurial I employ for this form, is the bichloride, in doses of $\frac{1}{16}$ to $\frac{1}{8}$ grain three times a day. I have been pleased with the local use of the subnitrate of bismuth in a number of cases in the course of the last year. I think, however, that the preparations of iron I have indicated have been generally more satisfactory in their effects. An alternation of these agents at the proper stage, but always combined with *rest*, I am persuaded will seldom fail in effecting a permanent cure in from seven to fourteen days.

The cases of primary syphilis have been generally quite obstinate, but neither presenting unusual symptoms, nor calling for unusual medication. In three cases I have been obliged to perform circumcision for phymosis in order to expose concealed chancres. I may remark upon this operation, that, in performing it, I prefer to pass a director under the prepuce upon the dorsal median line and while an assistant draws the skin well back, to penetrate the integument with a sharp pointed bistoury and incise it. If the mucous membrane still protrudes when the skin is relaxed, I pass the director under it a second time and incise with the bistoury as before to the apex of the re-entering angle of the divided skin. Then with the scissors cut off the flaps of the prepuce symmetrically on either side of the frenum to the extent desired. In this way, I think, we have less trouble with the mucous membrane than in the methods of either Ricord or Vidal.

During a part of the months of November and December we had a limited invasion of epidemic catarrh. It began on the 18th of November and ceased 16th December—just four weeks. These patients were seized with chills, sometimes severe and protracted; engorgement of the mucous lining of the frontal sinuses, nares, pharynx, larynx, trachea and sometimes the bronchial tubes—fever for a few days and a rather obstinate cough. The treatment consisted of saline cathartics, antimonials, extract of wild cherry, or cyanide of potassium in combination with tincture of tolu and syrup of acacia, and demulcent drinks. The affection yielded very readily.

We have had eleven cases of pneumonia thus far, this season—all of them severe, but fortunately none fatal. One of them was complicated with articular rheumatism.

These cases include what might be distinguished into capillary bronchitis, pleuro-pneumonia, biliary pneumonia, &c. The existence of the disease was verified in every instance, both by the physical and rational signs. Sixteen days was the shortest period any of them remained upon the sick report; thirty to forty days have been usually required to re-

establish strength sufficient to enable the men to return to duty without incurring too much risk of a relapse. I have treated, since I have been in charge of this hospital, nearly forty cases of this disease and have lost none. I have been informed by several of my friends that it has prevailed a great deal in this section of the country and has been very fatal. In referring to the records of this hospital I find one hundred and twenty cases registered in five years, beginning in the autumn of 1847. But among these I find thirty-three cases which were returned to duty in from one to three days, and two more which were discharged in four days. These cases could scarcely have been pneumonia. Deducting them we have eighty-five still left—a very large number. Among these there are five deaths recorded, which gives a mortality of one in seventeen—only about one-third the mortality in civil hospitals. I do not know the exact system of treatment adopted in those cases. Bloodletting was sometimes used; cups occasionally but rarely; antimony the same.

Among my cases venesection was resorted to but once—the first case—and that without my authority. It was practised by my hospital sergeant, a very discreet and intelligent man, in the night, when the man was brought in, because he thought it a case of emergency, and he had seen it practised in such cases by my predecessor.

The mortality under my treatment has been zero; it cannot, therefore, be compared with any other table. I suppose a death must occur in the course of time, and then we can get a ratio less than infinity. As it stands this mortality is less than any other reported. The fact is interesting in relation to the bloodletting controversy that has agitated the medical world since Professor Bennett's novel views have been published. Without assenting to those views in mass, I admit that my experience in pneumonia at this point, one of its favorite localities, goes to confirm Professor Bennett's opinion as to the fact that general bleeding is unnecessary in this disease. But, it will show at the same time, that neither is stimulation necessary.

My plan of treatment (I confine myself now to the thoracic difficulty—if other conditions exist, such as constipation, &c., they demand their own remedies) has been to confine the patient to bed till he is decidedly convalescent. I have seen more than one fatal relapse in the course of my life provoked by the patient's rising from bed when the disease was checked but not cured. Then wet cups at the seat of the disease as indicated by percussion and auscultation ; and these repeated following up the local lesion as it extends in the same lung or as it is propagated to the other. I have cupped a patient in this way two or three times a day for three or four days in succession. Dry cups have been frequently used during and after the same time. For constitutional treatment I have, until this winter, relied almost exclusively upon the tartrate of antimony— $\frac{1}{8}$ to $\frac{1}{2}$ a grain—as tolerance is established, every two hours, one hour, half-hour, as it can be borne. This winter I have used freely Norwood's tr. verat. virid. and with great satisfaction. Three cases have been treated with this alone, six with tart. antim. et pot., one with both, and one with veratrum followed by calomel and Dover's powder, and a blister in its latter stages. The calomel and Dover's powder were given because, notwithstanding the complete control of the heart's action manifested by the veratrum and the progressive resolution of the local engorgement as shown by auscultation, constitutional irritation, insomnia and delirium supervened, persisted, and assumed a threatening aspect. In this emergency I resorted to Stokes' plan, and substituted calomel and opium and a blister for the sedatives and local depletion employed in the earlier stages of the disease.

I have been careful always to endeavor to make the patient swallow a tablespoonful of strong animal broth frequently in the course of the day during the treatment. While the man is very ill he will resist this, but I feel persuaded I have seen very beneficial results from this course. Warm mucilaginous drinks are kept constantly at the bedside of the patient.

The cases which I have treated this year have been, eight upon the right side, one upon the left, and two double. They have all commenced at the inferior and lateral or posterior part of the lobe.

ART. III.—TWO CASES OF WOUNDS OF THE KNEE JOINT.

BY JAMES H. BUTLER, M. D.,

Demonstrator of Anatomy in the University of Maryland, late Resident Physician at the Baltimore Infirmary.

CASE 1.—Frank S., aged 34 years, of temperate habits, by occupation a sailor, and a native of Ireland, entered the Infirmary August 18th, suffering from a wound in the right knee.

The wound had been occasioned by the accidental discharge of a large pistol in the hand of a friend, who was descending a flight of stairs in front of him. The entire charge of the pistol, consisting of some half dozen buck shot, entered the knee at the lower border of the patella, shattering that portion of the bone, lacerating considerably the soft parts and penetrating the cavity of the knee joint.

There was great pain, swelling and ecchymosis of the part, and when first examined amputation was thought necessary; but with a view to test the effect of perfect rest, as well as to give the patient the little chance that remained of saving the limb, it was placed in the "anterior splint," that was in use in the house for cases of fracture, and carefully suspended. Locally the watery solution of opium was applied and an anodyne given internally.

In a few days suppuration commenced, when a light anodyne poultice was substituted for the water dressing. On the 8th day some shreds of clothing that had been carried into the wound by the shot were discharged; some loose portions of the lower border of the patella were also removed.

From this time the tumefaction of the limb abated, the

pain ceased and the discharge from the wound became healthy in character, less in amount and gradually ceased altogether. The case now progressed very favorably, and on the 1st of October the splint was removed. Friction was employed over the lower portion of the limb and passive motion used at the knee joint. In a few days the man began to move the joint without any assistance, and a pair of crutches being furnished him, he soon was able to move about the ward.

On November 1st, he left the house well. There was no ankylosis at all, and the knee joint, though somewhat disfigured gave no trouble whatever.

CASE 2.—William R., aged 28 years, of irregular habits, a native of Maryland, and by occupation a laborer, was brought to the Infirmary on the 23d of June, having an injury of the left knee joint.

The wound had been made some three hours previous to his entering the hospital by the accidental discharge of a revolver, a single ball from which had entered the knee joint. The ball had struck the patella fairly in the centre, passed through it without shattering the bone or producing fracture and had imbedded itself in some portion of the joint, where we were unable to detect it.

There was great pain in the limb, and so much swelling on the posterior portion of the knee joint, that for a time it was supposed the popliteal artery was implicated in the injury.

Remembering the treatment and the favorable result of the case before narrated, the treatment instituted was the same. The limb was placed carefully in the anterior splint, and before using the anodyne application, gentle pressure was made over the posterior portion of the knee joint to force out the effused blood, a considerable amount of which was expelled. In a few days the discharge indicated the presence of pus, when the water dressing was changed for a light poultice medicated with opium; but little pus however was discharged from the wound, and from the pain at the posterior portion of the joint, and the swelling there existing, it became evi-

dent that matter was accumulating in that situation ; an incision was accordingly made at that point, and a free exit afforded to the contained pus.

From this time the local symptoms gradually improved, and although the patient being of intemperate habits and feeble constitution, required the administration of porter and tr. of cinchona, the case became more promising, the discharge from the knee gradually ceased, though some swelling still remained, and on the 1st of August the splint was removed ; but on attempting to move the limb, it was found that ankylosis had taken place and that it was impossible to move the joint. In a short time the man was able to get about the wards, bearing without pain weight upon the limb, it being in a semi-flexed position.

On the 4th of September, he left the house ; since that time he has been frequently under our notice, but save the inconvenience attending a stiff knee joint, he suffers no trouble. The ball, that still remained, is undoubtedly encysted in some portion of the joint, where its presence gives rise to no irritation.

These cases show plainly, that gunshot wounds of the knee joint do not in all cases require amputation ; but that the previous habits and constitution of the patient, as well as the amount of injury inflicted, must be carefully considered before such an operation should be performed.

In the case first related, the injury was decidedly greater than was sustained in the second case, yet in this last patient no ankylosis resulted. This might be explained from the circumstance, that when suppuration occurred, in the first case, the matter had free exit from the wound and did not collect at the posterior portion of the joint ; in the other case, the wound being small and situated at the front part of the patella, this unfortunately did occur, requiring a counter opening to be made before being freely discharged, additional injury being thereby inflicted on the joint.

In all cases then, before resorting to amputation, it would

be well to try the effect of perfect rest and position ; and though in every case, we would not look for the functions of the joint being preserved in a state of complete integrity, if even we save the limb with ankylosis, it is certainly a decided improvement over the practice deduced from the axiom, that “ Gunshot wounds of the knee joint demand amputation.”

ART. IV.—TREATMENT OF INTERMITTENT FEVER.

BY SAMUEL J. RADCLIFFE, M. D.,

Member National Institute, Med. So., D. C., etc.

The article of Prof. Wm. A. Hammond, in the February number of the *Maryland and Virginia Medical Journal*, on “Nitric Acid in the Treatment of Intermittent Fever,” has induced me to present to the readers of the *Journal* the following table of cases that came under my treatment, while practicing medicine in Washington, D. C., during a period extending from the 1st of July, 1854, to 1st of July, 1856.

The number of cases I have recorded are in all one hundred and fifteen, but in the hurry of business, or from some other cause, I find I have neglected to make any remark, either of treatment or duration in forty of the cases—simply giving the disease and termination. In seventy-five of the cases however, I have noted the type, the remedy, the number of days in attendance, the age, and further remarks on individual cases.

It will be noticed that in the table nitric acid enters into the treatment used in but three cases, although I am confident I used it in many cases during the two years mentioned, with marked effect, and believe that the most of the forty cases were treated with that remedy though not so noted. I remember distinctly that my attention was first called to it by an article in the *American Journal of the Medical Sciences* for October, 1854, as noticed by Prof. Hammond, and that I used it soon after in a very old case, in a very malarious por-

tion of the suburbs of the city, with an entire arrest of the paroxysms, and as far as my memory goes, without the slightest recurrence of them in any form.

According to my experience during the period referred to, and subsequently, the remedy (nitric acid) acts more favorably in simple than in the more complicated forms of the disease. When there is splenic or biliary accompaniments or derangements, or engorgements induced by the severity of the stage that ushers in the paroxysm, it is best to use other remedies first, and I have found that it cannot be given with impunity or continuously without more or less deranging the digestive organs, unless care is taken to use a sufficiency of mucilaginous vehicle to obtund its action upon those organs. Yet it is my opinion that these, or whatever similar objections may be urged against its use, are not to be compared to the beneficial results that will accrue from a judicious administration of it, because they may be obviated by a correct diagnosis and a proper discrimination in the cases to be treated.

The table given below, therefore, is not intended to give a digest or exhibit of intermittent fever as treated with or by nitric acid. It is intended only to give a comparative view or idea of the efficacy of the several other remedial agents in general use for that affection, and its statistical information may add something to our already accumulated knowledge on the subject. I regret that I did not keep a fuller account of the forty cases not in the table, and many others not noted at all, for many of them were treated with nitric acid, and would probably give the data we desire, and upon which a more decided opinion might be founded.

The most of the cases in the table occurred between September 30th, 1855, and June 30th, 1856, in the eastern and northeastern sections of the city, and west and northwest of a long range of marshy ground skirting the Capitol Hill. Of course the eastern and northeastern winds waft the malarious atmosphere over that locality and make it at times very unhealthy.

Of the seventy-five cases in the table, forty-seven were quotidian, twenty-seven were tertian, and one quartan. Three of the cases were treated with niric acid, one with chinoidine, four with quinæ arsenit, one with quinæ sulph. and ferri ferrocyan combined, two with cinchonæ sulph. and ferri ferrocyan combined, twenty-eight with cinchoniae sulph. alone, and thirty-six cases with quinæ sulph. alone. A little study of the table will show the relative value of each remedy, as applied to the different types of the disease.

TABLE of cases of Intermittent Fever treated in Washington D. C., during the period commencing September 30th, 1855, and ending July 1st, 1856 :

Case.	Type.	Medicine used.	No. days in atten'ce	Age.	REMARKS.
1	Quotidian..	Quinine.....	2	45	Bilious complication, second attack.
2	....do.....	Cinchon	2	44	Primary attack.
3	Tertian....	Nitric acid	4	30	Had previously used quinine.
4	Quotidian..	Quinine..	2	30	Old case; arrested.
5	....do.....	.....do.....	1	4	
6	Tertian....	Nitric acid	2	30	Had previously used quinine. The type sometimes double.
7	....do.....	.....do.....	3	23	Had taken cinchon., prus. iron and quin.
8	Quotidian..	Quinine.....	1	45	Anemic.
9	Tertian....	Cinch and iron	1	32	Second attack.
10	Quotidian..	Cinchonia.....	4	40	Do.
11	Tertian....	Cinch. and iron	1	25	Paroxysms arrested.
12	Quotidian..	Quinine.....	2	3	Do.
13	....do.....	.....do.....	1	23	Do.
14	....do.....	.....do.....	1	52	Do.
15	Tertian....	.....do.....	1	37	Do.
16	....do.....	.....do.	1	30	Do.
17	....do.....	.....do.....	1	12	Do.
18	....do.....	.....do.....	1	5	Do.
19	....do.....	.....do.....	1	56	Do.
20	....do.....	.....do.....	1	37	Do.
21	....do.....	.....do.....	1	12	Do.
22	Quotidian..	Arsenite quin..	1	46	Do.
23	Quartan....	.....do.....	2	23	Old case; arrested.
24	Quotidian..	Quinine.....	2	20	Old case, yet did well.
25	....do.....	.....do.....	1	27	
26	....do.....	Quin. and iron.	3	35	Old case, prone to relapse.
27	Tertian....	.....do.....	2	28	Promptly arrested.
28	Quotidian..	Quinine.....	5	23	Old case, obstinate.
29	Tertian....	.....do.....	2	38	
30	....do.....	Arsenite quin..	2	18	Had used quinine and chinoidine.
31	Quotidian..	Quinine.....	1	40	Liable to relapse.
32	....do.....	.....do.....	4	20	Renal complication.
33	....do.....	Cinchonia.....	1	12	
34	....do.....	Arsenite quin..	5	21	Four months standing.
35	....do	Quinine.....	3	28	Old case, but yielded.
36	....do.....	Cinchonia	3	35	Very intemperate.
37	....do.....	.....do.....	2	13	Attacked five days previous.
38	....do.....	Chinoidine	5	36	From a relapse.
39	Tertian....	Cinchonia	7	32	Bilious accompaniment.
40	....do	Quinine.....	1	10	Promptly arrested.
41	....do.....	Cinchonia.....	2	20	Do.
42	Quotidian..	.....do.....	1	40	Do.
43	....do.....	.....do.....	1	24	Do.
44	Tertian....	.....do.....	1	35	Do.
45	....do.....	.....do.....	1	14	Do.
46	....do.....	.....do.....	2	30	Do.

TABLE—*Continued.*

Case.	Type.	Medicine used.	No. days in atten'ce.	Age.	REMARKS.
47	Quotidian..	Cinchonia.....	1	50	Promptly arrested.
48	....do.....	....do.....	1	50	Do.
49	....do.....	....do.....	2	45	Do.
50	Tertian.....	....do.....	1	16	Do.
51	Quotidian..	Quinine.....	2	16	Do.
52	....do.....	Cinchonia.....	4	35	Intemperate.
53	Tertian.....	....do.....	1	22	
54	....do.....	....do.....	2	35	Severe paroxysms.
55	Quotidian..	....do.....	1	12	Had been obstinate.
56	....do.....	Quinine.....	4	30	
57	....do.....	Cinchonia.....	2	40	From remittent.
58	....do.....	Quinine,.....	2	31	
59	....do.....	....do.....	1	9	
60	....do.....	....do.....	1	7	
61	....do.....	Cinchonia.....	4	80	
62	Tertian.....	Quinine.....	1	8	
63	Quotidian..	....do.....	1	21	
64	....do.....	Cinchonia.....	4	40	
65	....do.....	....do.....	1	15	
66	....do.....	....do.....	1	40	
67	....do.....	....do.....	3	35	Eight months pregnant, quite obstinate.
68	....do.....	Quinine.....	2	18	
69	....do.....	....do.....	3	70	
70	....do.....	....do.....	1	20	
71	....do.....	....do.....	1	32	
72	Tertian....	Cinchonia.....	3	30	
73	....do.....	....do.....	3	29	
74	Quotidian..	Quinine.....	1	4	
75	....do.....	....do.....	2	35	

TRANSLATIONS.

ART. I.—ON THE TRANSMISSION OF SYPHILIS BY VACCINATION.

BY M. VIENNOIS.

The following are the conclusions which M. Viennois has arrived at relative to this subject :

1. Syphilis has almost from the origination of vaccination been observed to follow the operation by a number of authors entitled to confidence—French, English, German, Italian, &c.

2. When a syphilitic patient having the disease in a latent form is vaccinated the syphilis may become active under the forms of papular, vesicular, or pustular eruptions. A chancre, however, is never developed from the vaccine puncture.

3. On the other hand if a healthy person is vaccinated with the vaccine virus of a syphilitic person, if the point of

the lancet has been charged with a little blood at the same time as with the vaccine matter, the two diseases are transmitted together ; the vaccine affection with the vaccine virus and syphilis with the syphilitic blood.

4. In these cases, of which a number of examples have been collected, the vaccine disease is developed first, because the period of incubation is shorter and the evolution more rapid than in syphilis. This latter appears subsequently and is manifested at first by a characteristic lesion at the inoculated point.

5. The primary lesion then, by which syphilis is manifested succeeds the vaccine pustule, and is presented under the form of the indurated chancre with multiple adenitis, and, in a word, with all the characteristics of the primitive syphilitic chancre. The law, therefore, established by M. Robert, *that syphilis always commences by a chancre even when it proceeds from a secondary affection, or even from syphilitic blood*, is therefore fully confirmed.

6. After the primitive chancre is developed at the inoculated point and after the ordinary period has passed secondary affections manifest themselves, and progress in the usual manner without differing in any respect from the similar affections which characterize syphilis transmitted in the ordinary manner.

7. When the two kinds of virus are intentionally mixed together, as has been done by MM. Sperino and Daumès, the result is the same. The one virus does not destroy the other, but each accomplishes its own distinct evolution.

8. The vaccine matter is then only a vehicle for the syphilitic virus contained in the blood, dividing and extending it as we may do with a drop of water, for example, without modifying in any respect its properties or effects.

9. It is therefore important not to employ the vaccine virus taken from a person suspected to be syphilitic, or to employ matter taken from a child of unknown parents before the age at which hereditary syphilis is manifested by its usual signs.

10. If special circumstances should render this employment

necessary great care should be taken to collect the vaccine virus only—virus without mixture with blood or syphilitic matter.

11. In no case should a healthy subject be vaccinated with virus from a person known to be syphilitic, for notwithstanding all precautions that may be taken it is always preferable to employ the vaccine virus of a healthy individual.

12. This precaution is more important as with the vaccine virus of a single syphilitic subject a number of persons may be vaccinated and to almost all of them syphilis be transmitted, (as, for example, the cases of Ceriale of Cremona, where the victims are counted by forties, sixties, &c.)

13. By attention to the precautions above mentioned all trouble will be avoided and no pretext afforded to the opponents of vaccination for discountenancing the operation—for syphilis following the vaccine puncture is not the fault of the vaccine virus, but of the operator. Let us, then, continue to vaccinate, and even to revaccinate, but let us be careful whence we obtain our virus.—*Gazette Medicale de Paris*, Jan. 26, 1861.

W. A. H.

ART. II.—CYSTICERCUS CELLULOSUS IN THE EYE.

BY DR. ROSER.

Among the numerous parasites that may exist in the animal system, none perhaps merits a closer examination than the cysticercus.

The recent and satisfactory experiments of Küchenmeister and V. Seibold have established its relation to tænia in the most accurate manner. Among the lower animals after the fox it occurs most frequently in the hog, and produces the disease known as the *measles*. It is found in this animal occasionally in great abundance in the areolar tissue, the muscles, glands and brain, within and between the membranes of the eye, in the aperture of the pupil, and in the

ventricles of the brain. In the serous cavities it exists in a free state, but in the other parts of the body it is enclosed in a special capsule derived from the animal in which it is lodged.

The occurrence of this parasite in man in the voluntary muscles, and in the heart, cellular tissue and brain, cannot be considered unusual. Its appearance in the anterior chamber of the eye continues to be a medical curiosity, and deserves the attention of every oculist.

A merchant, 31 years of age, who had previously enjoyed good health, was suddenly attacked with violent vomiting accompanied with occasional impairment of vision, especially upon bending the head forward. A physician who was called in, neglecting to examine the eye, prescribed an aperient at random. Nearly six weeks having elapsed without bringing any relief, the patient became apprehensive of a total loss of vision and accordingly he dismissed his former attendant and sought my assistance. I found him to be a strong and well-looking man, presenting nothing unusual in his general appearance; but what was my astonishment, when on examining his eyes, I observed in the right anterior chamber a foreign body of the size of a small lentil and somewhat transparent. I thought at first that the lens had fallen forward. Still as such luxations of the lens are generally followed by inflammation of the iris, cornea and often of the whole globe of the eye, while in the case before me these parts presented nothing abnormal in form, size or consistence; as, moreover, the power of vision was impaired only when the foreign body passed before the pupil, and as no wound had been received, I abandoned the idea of a dislocation of the lens. The ball of the eye could be moved in all directions without exciting pain or any peculiar sensation.

Uncertain with respect to the character of the disease, I determined, as the case presented no urgent symptoms, not to interfere at all but to await the event patiently.

Four weeks afterwards, however, considerable injection of vessels around the cornea appeared, accompanied with a sensation of pressure which was aggravated whenever the patient

lay down. The foreign body appeared to have become somewhat enlarged and the movements of the iris were sluggish. On making the most careful examination, I could perceive no distinct motion of the body. I discovered a transparent vesicle with a white point in the middle, which led me to think that the body described was perhaps nothing else than a cysticercus capsule.

As all practicable means had been of no avail, and the patient urgently requested to have the body removed from his eye, I determined upon an operation; not, however, without some anxiety. An incision of the cornea was effected without much difficulty by means of Beer's cataract knife. On seizing the foreign body with the hooked forceps, and drawing it out, the cyst broke, and there remained only a grey transparent substance, which with great care I placed upon an object-glass. I then covered it with another glass and subjected it to some pressure in order to render it more transparent. Under the microscope the head of the animal could be discerned plainly, with its suction-cup, and coronet of hooks, as well as a portion of the wrinkled neck. The head was very much like that of a taenia.*

The wound of the cornea healed rapidly; the power of vision is unimpaired; all uneasy sensations have ceased; and the vomiting has not returned.—*Correspondenz Blatt des Vereins für Gemeinschaftliche Arbeiten.*

S. C. C.

ART. III.—FOURENS' RECENT EXPERIMENTS ON THE EFFECT OF MADDER MIXED WITH THE MOTHER'S FOOD ON THE FœTUS.

BY THE ABBE MOIGNO.

These have been made on rabbits, the madder having been administered for eighty days, nearly thrice the length of the period of gestation. The bones alone and the teeth, which are of true bone, were colored. The result of his first experiments

*An accurate description of the cysticercus cellulosus may be found in Rokitansky's Pathological Anatomy, Vol. I, page 267.

has thus been confirmed. Heretofore foetal life has remained enshrouded in the deepest mysteries. We do not know how the foetus respires or is nourished. It has even been believed that the amniotic liquid nourished the foetus, whereas in reality it is a secretion of the latter. The foetus of oviparous animals respires through the shell of the egg which is permeable by air, but how does the foetus of the viviparous animal respire? Certainly not through the membrane, for several physiologists have shown that the asphyxia of a foetus separated from the mother and kept within the unbroken membranes, takes place generally after twenty minutes. This time, compared with that which elapses before asphyxia takes place in animals plunged in water, which is only two minutes, is relatively considerable. A physiologist, whose name escapes us, plunged a rabbit, taken at the thirtieth day of gestation, the term of its foetal life, into water, and it was asphyxiated after two minutes; he also extracted a foetus without rupturing the membranes and ascertained, watch in hand, that it still lived eighteen minutes; its asphyxia required exactly twenty minutes, as previous experiments had shown. Now, thanks to the brilliant researches of Flourens, all these mysteries are dissipated,—the foetus of viviparous animals respires through the mother; this respiration and nutrition find their explanation easily in the grand fact that the mother's blood passes directly into the foetus and circulates in its organism.—*Cosmos.* L. H. S.

ART. IV.—EFFICACY OF THE PREPARATIONS OF NUX VOMICA IN CERTAIN CASES OF DYSPNÆA.

An Irish physician, M. Duncan, has reported a case in which he successfully employed the extract of nux vomica with ipecacuanha in the treatment of urgent dyspnœa dependent upon chronic bronchitis.

M. Duncan was aware of the fact pointed out by Stokes as a pathological law, that when a mucous membrane is in-

flamed the contiguous muscular fibres are at first subjected to increased innervation, and are eventually paralyzed in consequence of the previous excessive stimulation. He was accordingly led to believe that the muscular tissue of the bronchia was paralyzed in the case that came under his notice, in consequence of its connection with the inflamed bronchial mucous membrane; and that in this fact was to be found the cause of the excessive dyspnœa under which his patient labored. Considering the marked prolongation of expiration as diagnostic of this paralyzed condition, he determined to make use of *nux vomica*; all other agents employed against the inflammatory and catarrhal elements of the disease having been without effect.

The case was that of a woman 40 years of age,—married and the mother of a family,—who entered the Hospital Adélaïde on the 12th of last December, having contracted a year ago a severe bronchitis, from which she had never recovered.

When this woman came under the attention of M. Duncan, she had suffered for several weeks from orthopnœa, which deprived her of repose. She was pale and emaciated, and in a state of alarming exhaustion. The physical signs of chronic bronchitis, accompanied with emphysema, were observed; the convexity of the breast was increased,—its resonance exaggerated, and sibilant and sonorous râles were heard over the whole surface of the chest. There was a remarkable disproportion between the duration of inspiration and that of expiration; the latter being longer than the former in the ratio of 3 to 1.

After employing various agents without effect, and among others the different expectorants, M. Duncan, in conformity with the view described above, directed pills composed each of 25 milligrammes of the extract of *nux vomica*, and 5 centigrammes of powdered ipecacuanha; three to be taken during the day. At the end of a week the quantity of *nux vomica* was doubled. From the administration of the first doses a marked improvement was observed. The difficulty of respiration was sensibly diminished, so that the patient

could repose in the horizontal position ; expectoration was accomplished with ease, the appetite returned, and constipation ceased. After a short time the bronchial râles lost their intensity ; and the ratio of expiration and inspiration became natural. On the 6th of January, 15 days after beginning the use of the nux vomica, the patient was so much improved as to be able to leave the hospital.—*L'Abeille Médicale.*

S. C. C.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

I. *On Diphtheria.* By EDWARD HEADLAM GREENHOW, M. D., Fellow of the Royal College of Physicians, Physician to the Western General Dispensary, and Lecturer on Public Health at St. Thomas' Hospital. New York, London, &c. Baillière Brothers. 1861.

We have in the above work a neat octavo volume of one hundred and sixty pages, which contains a mass of valuable information upon this interesting disease. The author, Dr. Greenhow, took the most available means of becoming thoroughly acquainted with it by visiting, in person, various sections of England where it prevailed, by observing its progress and treatment under varied conditions and circumstances, and by treating numerous cases in his own public and private practice. From the records of medicine, he also traced out a history of the disease,—for it has a history,—and thus, between information derived from books, from experienced practitioners, and from his own observations, he has been enabled to bring together in a small compass all that is at present established upon the subject.

What is diphtheria? It is a form of angina which usually prevails epidemically, attended by more or less fever,

of the asthenic type, with a train of symptoms and sequelæ pretty well marked, and sufficiently uniform to be characteristic. The diagnostic mark, *par excellence*, is a deposit of false membrane, which may appear only in one or more small patches upon the tonsils and adjacent parts, or which may spread very extensively over the mucous membrane of the mouth, nasal passages, pharynx, oesophagus, larynx, trachea and bronchial tubes to their last ramifications. It may appear elsewhere, indeed, upon mucous surfaces, or upon the abraded cutis, but its usual seat is upon the parts mentioned. It is this false membrane which has given name to the disease, (from $\Delta\phi\beta\epsilon\rho\alpha$, skin or leather,) a name first applied by Bretonneau, who in 1821-6, brought the disease under public notice.

Is it a new disease, or an old disease under a new name? It has been accurately described by European physicians in the sixteenth, seventeenth, and eighteenth centuries, and by American physicians (especially by Dr. Samuel Bard) in the eighteenth century, but it had been described before by a decade and a half of centuries, for Aretæus, the Cappadocian, leaves the disease described in his works just as we find it at the present day.

Is it infectious, or contagious? Bretonneau considered it inoculable; that is, that the secretions from the throat, &c. brought into contact with susceptible parts of a healthy subject would communicate the disease, but that it would not be transmitted by the mere aid of the atmosphere. Our author does not agree with Bretonneau, but certain facts that have come under our notice, lead us to incline to his opinion. It may be assumed as certain that diphtheria is not highly contagious or infectious, for intercourse with the sick is rarely followed, considering the whole number of cases, by an extension of the disease; but it has so often stricken members of the same family, or vicinage, after the arrival of one subject afflicted with it, that we cannot but consider it to some extent communicable. In our experience, we may say, we have seen well marked cases, where no care was taken to

prevent communication, without any extension ; at the same time we think it but prudent, as a practical rule, to keep the sick and the well, especially among children, apart. Our author, who believes in the infectious nature of diphtheria, says that withal, he knows of no instance where the disease was transmitted by fomites.

Is diphtheria identical with scarlet fever? Assuredly not. It often appears with scarlet fever, but many patients have the two diseases successively, and in no case does an attack of the one give immunity from an attack of the other.

Is it identical with croup? This is too great a question to be answered in a few words. Bretonneau "considered the epidemics observed by himself to be identical in character with the disease described by the Italian and Spanish physicians of the seventeenth century under the names of *morbus syriacus*, *morbus suffocatus*, and popularly known in Spain under the name of *garrotillo*, and believed diphthérite and croup to be the same disease." We may here remark, *en passant*, that the Spanish word *garrotillo* simply means quinsy; but its derivation (*garrote*, strangulation or strangling,) makes the term sufficiently applicable to the diphtheritic form of quinsy. Our author does not agree with Bretonneau in considering these diseases identical, and the latter is certainly in a minority among authorities. He is pretty well sustained, however, by his own countrymen, while British and American authors concur with Dr. Greenhow. The analogies between the two diseases are very striking ; the contrasts may be briefly stated thus :—1. Diphtheria begins in the fauces ; croup in the larynx or trachea. 2. Diphtheria is asthenic ; while croup is a sthenic disease. 3. Diphtheria is a blood disease in which the whole system is attainted ; while croup is a strictly local disease. 4. Diphtheria is contagious ; croup is non-contagious. If these distinctions were absolute, the argument would be closed ; but it often happens, practically, that the distinctions are far from being obvious. We do not accept as an established fact that the two are distinct diseases, but we incline to the opinion that they are.

Is the false membrane identical in character in croup and diphtheria? The exudation is precisely the same, consisting of coagulated fibrine, and epithelium, but in diphtheria, the membrane often undergoes changes not observed, for obvious reasons, in the more rapid progress of ordinary croup.

Is diphtheria owing to parasitic growth? "Low forms of cryptogamic plants," says our author, "are occasionally found on the exudation, a circumstance which gave rise to the belief that the disease is of parasitic origin. This opinion is disproved by the facts that, on the one hand, the supposed parasite is not invariably present in diphtheria; and on the other, that it is frequently found on unhealthy mucous surfaces which are not of a diphtheritic origin."

In confirmation of this view, we take the following passage from the excellent prize essay on diphtheria, by Dr. Slade, of Boston:

"As the development, then, of this parasitic growth takes place in a variety of other diseases, we must regard it as purely accidental, or at least secondary, and by no means as characteristic, or an exciting cause of the disease under consideration." —*Amer. Journal of Medical Sciences, Jan. 1861.*

These gentlemen have both taken a great deal of pains to get at the true state of the case, but their views are not by any means of universal acceptance. The same journal which gives Dr. Slade's essay to the world, gives almost in consecutive pages an able review of a work on *Pseudo-membranous angina*, by Dr. Jodin, of Paris, which is intended precisely to show:—1. That the concretions, the source of all the symptoms, are products of parasitic or vegetable origin, and 2. The basis of treatment consists in the application of topical parasiticides, a medication as rational as it is happy in practice. Happily for the patients, the physicians agree better in practice than they do in theory, inasmuch as all parties make applications decidedly parasiticide, whether so intended or not.

Dr. Jodin insists that he has always found parasitic growth in false membranes, albeit in some specimens the cryptogam

is lost amidst false membrane and globules of pus. Yet in other portions from the same sources, he has uniformly found it. "For a moment, our author suspected he might have been deceived, and fancied that he saw spores in granulations, or tubes in fibres of false membrane. But he declares they were spores such as they have been described and figured by micographers, such as they are seen in all moulds, rounded or oval, regular, isolated, or grouped in twos, threes, or a greater number, glued end to end, or joined by a pedicle of more or less length, forming by their grouping chains, from which secondary chains were detached ; these were, indeed, sporiferous tubes, containing spores in their interior, and permitting some to escape from their free extremity; straight, curved, simple, or ramified tubes, articulated or not, interlaced, entangled, sometimes resembling bunches of gooseberries. There was also the empty tube or mycelium," &c. &c. "Very expert micographers have failed to discover anything but false membrane in croup, (or diphtheria,) but their failure is owing to the mode of seeking the cryptogam."

The vegetable parasite, or mould, effects a lodgement most effectually upon ill-conditioned subjects, and broken surfaces. "It attacks, in preference, the scrofulous and convalescents from eruptive fevers, because the first have the tonsils hypertrophied which arrests the cryptogams in their passage, and the second have the mucous membrane deprived of its protective epithelium." We may say here, that in reference to treatment, Dr. Jodin places his trust in topical applications, such as are competent to destroy the parasite ; and he approves, in extreme cases, of opening the trachea for the purpose of introducing sponges charged with parasiticide liquids, the best of which is the tincture of the perchloride of iron. The reviewer of his work, Dr. Ruschenberger, avows that he is not convinced of the correctness of Dr. Jodin's conclusions. The latter, however, is not singular in his views and doctrines. Dr. Laycock, among others, believes in the parasitic origin, and holds that the parasite is the *oidium albicans*. It is argued that if parasitic growth be the *fons et origo* of

diphtheria, this could not be considered as belonging to the category of blood diseases, where it does belong, according to the opinions of the majority of observers. But Dr. Laycock thinks this to be an assumption not safely tenable. He gives some instances of parasitic blood diseases in insects; and declares he is inclined to think that, upon investigation, "it would probably be shown that these parasites (in the pseudo-membranous diseases which attack the human subject) may act either through the blood, or locally only.

"I may observe in conclusion," he says, "that antiseptics and parasiticides appear to be the most efficient remedies in diphtheria. I can speak very favorably of the tincture of the sesqui-chloride of iron (an antiseptic) and hydrochlorate of potass."—*Slade's Essay, Appendix B.*

The discrepancy of opinion among authorities as to the parasitic origin of diphtheria remains yet to be adjusted by future observations. At present the breach is very wide.

"Non nostrum tantas componere lites."

We do not deem it necessary here to trace the numerous complications with which diphtheria is often associated, nor even to enumerate all the symptoms which may attend upon it; before passing, however, to the sequelæ, morbid anatomy and treatment, we will take a brief paragraph from Dr. Greenhow's work on a matter which must not be overlooked:

"Albuminuria, commencing early in this disease, usually within a few hours, and gradually disappearing with the local affection, sometimes, but by no means invariably, accompanies diphtheria. If the urine be much loaded with albumen, the complication is a serious one; but cases have done well in which a considerable cloud of albumen was deposited from the urine by the proper tests, and very severe, and even fatal, cases of diphtheria have been unattended by albuminuria."

The renal complication which induces albuminuria is observed in some localities in nearly every case, and in others quite rarely, but its manifestation is always a matter of serious moment. It is a frequent attendant upon the malady, but is by no means an essential element or symptom thereof.

We will glance rapidly at the most ordinary sequelæ of diphtheria. A speedy and complete recovery from the disease is often arrested by conditions sufficiently frequent to be specified. "Occasionally many months elapse," says our author, "before perfect recovery; and I have known one instance in which the patient did not regain his strength for nearly a year. Besides the extreme anæmia, which is so marked a result of diphtheria, this disease is very apt to be followed by certain nervous affections of a peculiar kind. These consist of paralysis, and anæsthesia of particular muscles, tenderness and tingling of the skin, gastrodynia, impairment of vision and deafness."

The practitioner will bear in mind that these sequelæ often come on when the patient is convalescent and apparently free from danger. Patients have even been stricken by sudden death, when the medical attendant had pronounced them restored to health. There is no disease that demands more vigilance during convalescence than this. Excessive fatigue or any casual imprudence may bring on hopeless prostration.

Paralysis is one of the many sequelæ often attendant upon diphtheria. "The most frequent form of paralysis," says Dr. Slade, very truly, "has been that of the soft palate. The symptoms are a nasal twang in the speech, incapacity for suction, and the regurgitation of fluids by the nostrils. This form was thought by M. Troussseau and others to be local in its origin." M. Troussseau afterwards changed his opinion, and now believes it to be owing to the action of the diphtheritic poison upon the blood.

We have seen this paralysis of the soft palate and of the adjacent muscles give rise to a great deal of distress, and even to dangerous symptoms. One of our own children, a boy of four years of age, suffered with it for several weeks, and still longer with paralysis of the arms, which is not so common; for a long time he was unable to raise the arms so as to touch his head with his hands. He recovered in time, but remained anæmic and delicate for a twelvemonth after.

A case is related by M. Tardieu in the *Union Médicale*, in

which a young woman lost her life from the passage of food into the left bronchus, after she recovered from the primary attack of diphtheria, but while still affected with paralysis of the soft palate. She entered the hospital (Lariboisière) on the 1st of July 1859, and by the 12th she was free from all the symptoms of diphtheria proper, but remained in hospital on account of the paralysis. On the 1st of August while dining, she was seized with suffocation. The symptoms became immediately very alarming, and she indicated that there was an obstruction to her breathing located on the left side, some two fingers breadth below the top of the sternum.

Upon being interrogated, she declared that she was not at all conscious of having swallowed anything the wrong way ("de travers.") The house-pupils used emetics, sinapisms, &c., without any good effect, for she died at 11 o'clock at night. They thought the obstruction too deep to be relieved by tracheotomy. M. Tardieu regrets that they rejected this resource, as he thinks that the violent expulsive efforts which usually follow that operation would have had a powerful tendency to dislodge the foreign body. However, she died, and when the body was examined a piece of cooked meat was found in the left bronchus obstructing its calibre, and fairly moulded into the orifices of the bronchial ramifications.—*Annuaire de Medicine, etc., Paris, 1860.*

The sequelæ in diphtheria bear no definite relation to the severity or mildness of the primary attack. It often happens, after this disease, as after scarlet fever and other maladies, that very formidable sequelæ follow slight attacks, and trivial sequelæ the most severe attacks.

R. McS.

[To be concluded in May number.]

II. *A Practical Treatise on the Aëtiology, Pathology, and Treatment of the Congenital Malformations of the Rectum and Anus.* By WILLIAM BODENHAMER, M. D. Illustrated by 16 plates, and exemplified by 287 cases. New York: Samuel S. & William Wood. 1861. 8vo. pp. 368.

Until the publication of the volume before us the medical profession possessed no complete work on congenital malformations of the rectum and anus. These affections have by no means been neglected by surgeons, but their histories of cases and their observations thereupon have been left scattered here and there in medical periodicals, in the proceedings of societies, in general treatises on diseases of the rectum and anus, and in the manifold systematic works on surgery. It is true that several valuable monographs have been published on these malformations, but no one of them can claim to be in any wise complete.

In this volume Dr. Bodenhamer has endeavored to collect together all the cases of congenital malformation of the rectum and anus that have ever been recorded. He has arranged them in different varieties and discussed the several modes of treatment that have been adopted or recommended in each. A bibliographical index and plates representing the anatomy of the deformed parts and the operations required have also been added. To accomplish satisfactorily such a work demanded great industry, a more than ordinary acquaintance with medical literature, sound judgment in discriminating between different operations, and a rare capability of classifying and arranging. Nevertheless, after a very careful examination of this volume, no hesitation is felt in declaring that the author has well and ably accomplished his task, and that the treatise presented by him to the profession must be considered a systematic, accurate, and remarkably complete exposition of all that is known concerning congenital malformations of the rectum and anus, their aëtiology, pathology, classification and treatment. We proceed to give an analysis of the volume, and then to point out all the deficiencies we can find in

it. This is not from any desire to find fault on our part, but is preferred as enabling us to accomplish our task most speedily, and it will also be found to furnish the most conclusive testimony we could offer of the remarkable completeness of this treatise.

All congenital malformations of the rectum and anus are classified by Dr. Bodenhamer in nine species, to each of which a separate chapter is devoted. Each of these chapters is divided into three sections, containing, respectively, the description of the peculiar deformity, its treatment, and cases and remarks. An introductory chapter contains a copious bibliography, some general remarks and a discussion of the aetiology, the anatomical and pathological characters, the general symptoms, and the prognosis of these malformations. An eleventh and concluding chapter contains a lengthy consideration of the subject of abdominal artificial anus. The volume also possesses a well written preface, setting forth the necessity of such a publication and the object of the author, a table of contents giving a very convenient and complete summary of what the book contains, an alphabetical index to the illustrative cases, a general index of topics and sixteen plates, after Von Ammon, Bourgery, Bernard and Huette, Cruveilhier, Mieban, and Baillie, representing the anatomical arrangement of the organs in these deformities, with the instruments employed and the operations practised in their relief.

The bibliography occupies sixteen pages; it refers to works in the Latin, German, French, Italian and English languages, and is conclusive evidence in itself of the extent of Dr. Bodenhamer's researches. So complete is this bibliography that we are able to make only the few following additions, which are here given for the purpose of pointing them out to the author in the hope that they may be inserted in a future edition of his work, and, also, that their study may induce him to modify to some extent the opinions he now holds in regard to the relative value, and the mode of performing certain operations which we will soon take occasion to discuss:

- Bérard A. et Maslieurat-Lagémard.—*Mémoire et Observations sur les Rétrécissements du Rectum.*—(*Gazette Medicale*, 1839, p. 146.)
- Bardinet.—*Gazette des Hôpitaux*, 1853, p. 125.
- Blin.—*Comptes-Rendus de la Société de Biologie*, 1849, p. 147.
- Blot.—*Comptes-Rendus de la Société de Biologie*, 1852, p. 131.
- Bouisson.—*Des Vices de Conformation de l'Anus et du Rectum. Thèse. Concours de Clinique Chirurgicale*, in 4o. 1851.*
- Curling, T. B.—*Inquiry into the Treatment of Congenital Imperfections of the Rectum by Operation, Founded on an Analysis of One Hundred Cases, Nine of which Occurred in the Practice of the Author.*—(*Medico-Chirurg. Trans.* Vol. xlivi, p. 271.)
- Danyan.—*Bulletin de la Société de Chirurgie.* 1er aout, 1849, t. i, p. 314.
- Debout.—*De l'Etat de la Thérapeutique Concernant des Vices de Conformation de l'Anus et du Rectum.*—(*Bulletin de Thérapeutique*, 1855, t. xlvi, p. 347.)
- Depaul.—*Bulletin de la Société Anatomique*, 1840, p. 77.
- Goyrand.—*Etudes Pratiques sur l'Atrésie, ou Malformation de l'Anus et du Rectum, etc.*—(*Gazette Médicale*, 1856, p. 510.)
- Né'aton.—*Eléments de Pathologie Chirurgicale*, t. v, p. 34.
- Potrel.—*Gazette Médicale*, 1844, p. 706.
- Robert.—*Rapport sur une Opération d'Anus Artificiel.*—(*Bulletin de l'Académie de Médecine*, t. xxi, p. 931 et seq.)
- Saint-Hilaire.—*Journal Complémentaire des Sciences Médicales*, t. xxi, p. 236.
- Troussel-Delincourt.—*Jour. de Méd. de Chirurg. et de Pharmacie*, 1822, t. xiii, p. 3.
- Wallace.—*Am. Jour. Med. Sciences*, April 1860, p. 375.
- Williamson.—*Gazette Médicale*, 1846, p. 878.

From the numerous sources designated in the bibliography, Dr. Bodenhamer has collected nearly three hundred cases of malformation, which are classified, as said before, in nine species.

In the first species there is a preternatural narrowing of the anus at its margin, occasionally extending a short distance above this point.

*Dr. Bodenhamer refers to a case reported in this thesis, at page 212, but it does not appear that he knows the work itself.

In the second species there is complete occlusion of the anal aperture by a simple membrane, or by the common integument, or a substance analogous to it, more or less thick and hard.

In the third species there is no anus whatever, the rectum being partially deficient and terminating in a cul-de-sac at a greater or less distance above its natural outlet, without any communication, either externally or internally.

In the fourth species the anus is normal, but the rectum at variable distances above it, is either deficient, obliterated, or completely obstructed by a membranous septum.

In the fifth species the rectum terminates externally by an abnormal anus, located in some unnatural situation as at some point in the sacral region; or the rectum is prolonged in the form of a fistulous sinus and terminates by an abnormal anus, at the glans penis, the labia pudendi, or at different points in the perinæum. The natural anus being generally absent, its functions are performed by the abnormal one.

In the sixth species the rectum opens preternaturally into the bladder, the urethra, or the vagina; or into a cloaca in the perinæum with the urethra and the vagina. In these instances the normal anus does not generally exist.

In the seventh species the rectum is normal with the exception that either the ureters, the vagina or the uterus, open preternaturally into it.

In the eighth the rectum is entirely wanting.

In the ninth the rectum and the colon are both absent and there is usually an abnormal anus situated in some extraordinary part of the body.

We do not propose to discuss in detail the respective methods of treatment advised by Dr. Bodenhamer for these several varieties of malformation. Giving a description of all the methods that have ever been adopted or recommended, together with his own individual views respecting them, he affords the reader an opportunity of forming his own conclusions in regard to their merits, and it is enough for us to

say that the methods preferred by him are, with one or two exceptions, those we ourselves believe to be the best. What these exceptions are we proceed at once to state.

In those cases where the rectum opens into the vagina, there is no operation described by Dr. Bodenhamer, equal to the following one performed by M. Nélaton, which we will give in his own words:

“On a newborn child brought to us in the Hospital St. Antoine, and in whom the rectum opened into the vagina, the following operation was practised, with perfect success. In the perinæal region a crucial incision was made, the anterior branch of which was a little larger than the three others, and after dissecting the flaps and the subcutaneous cellular tissue, the rectum was reached, turned forward from its normal position. This intestine was in the first place isolated below, then on the sides, and by the aid of a blunt instrument we succeeded without much difficulty in isolating it completely as far as the vagina, which the length of the anterior incision enabled us to accomplish, and then the rectum was cut off circularly with a bistoury, close to the vagina. The inferior extremity of the intestine, thus rendered movable, was easily displaced and fastened by sutures to the integuments of the perinæal region. In this way we preserved the whole length of the intestine, and of the recto-vaginal fistula, only the vaginal orifice remained, and this no longer had any communication with the rectum.”—*Éléments de Pathologie Chirurgicale*, t. v, p. 35, (Paris, 1858.)

In those most deplorable cases where the rectum is entirely wanting, or at least so far so that the formation of an anus in the perinæal region is out of the question, nothing is left but to establish an artificial anus in the iliac or lumbar region. To this subject of *Abdominal Artificial Anus*, Dr. Bodenhamer has devoted a whole chapter of over fifty pages, wherein the respective merits of the two operations of Littré and of Callisen, with the various modifications recommended by Pillore, Martin, Velpeau and Amussat, are very fully discussed. After carefully comparing the two operations of opening the intestine in the groin or in the lumbar region, Dr. Bodenhamer gives the preference to the former, as more simple and easy of execution on account of the difficulty of

finding the gut in the loins, as establishing an anus in a more favorable position, and also for the reason that he does not believe the opening of the peritonæum, which is avoided in the operation of Callisen, "is so grave an affair as is generally supposed."

Of these three reasons for preferring to establish the anus in the groin, we believe the last two to be incorrect, and, as regards the first, that more extended anatomical researches, with which Dr. Bodenhamer does not appear to be yet acquainted, has rendered its truth very doubtful. To deem it more inconvenient to have the anus behind than in front, is to forget that the natural anus is there placed, and to ignore the manifest advantages of having it placed at a distance from the organs of generation. As to the danger of opening the peritonæum, if it is from "taking into consideration the success that usually attends hernial operations" that he is led to believe it to be "by no means so grave an affair as is generally supposed." Having occasion some time since to examine the statistics of the operation for strangulated hernia, we found that of 77 cases reported by Sir Astley Cooper, 36 proved fatal, or more than 46 per centum. Of 545 cases recorded in the journals collected by Dr. Turner, 260 are reported to have died, or nearly 48 per centum. In the Paris hospitals, from 1836 to 1841 the disciples of Boyer, who also teaches that the opening of the peritonæum is not so grave an affair as is generally supposed, performed it 183 times; of these cases 114 died, or over 62 per centum. For our own part, we doubt very much whether the operation of hernia is generally supposed to be so grave an affair as it really is, for in this, as in all operations interesting the peritonæum, there seems to be a general disposition, of late years, to ignore the huge mortality always accompanying such operations. The dangers of opening the peritonæum are in reality so great, that when there is any possibility of avoiding it, to effect the same or a similar purpose, it should always be done. Inflammation of this membrane, let us add, is not less frequent nor less serious in children than in

adults. We know, moreover, from the researches of Bou-chut and others, that peritonitis is frequently the effect of the hindrance to the passage of foecal matter in cases of mal-formation, and it is to be supposed, therefore, that the exposure of the membrane already inflamed, in these cases, to the air and to the irritation of the handling indispensable to the operation, is to be dreaded even more than in most others.

As regards the difficulties of finding the colon in the lumbar region, they have been very much diminished by the recent anatomical researches of Robert. From repeated examinations of the bodies of children born dead, or that died before the evacuation of the meconium, Robert has determined that the descending colon is less enveloped by peritoneum in proportion as it is examined nearer to the chest, and nearer to the angle the arch of the colon forms, to become the descending colon; that the descending colon, even when it passes in front of the kidney in place of running alongside of its external edge, preserves its normal position higher up, that is to say, immediately below the angle of the transverse colon. It follows from this, therefore, that in order to open the intestine without wounding the peritoneum, the incision should be made very near to the false ribs, and not in the middle of the space between them and the crest of the ilium as is generally advised. An incision made in the place just indicated, commencing near the edge of the common mass of the sacro-lumbar and the longissimus dorsi muscles, divides a few fibres of the latissimus dorsi, the aponeurosis of the transversalis and a portion of the quadratus lumborum; a portion of the posterior surface of the kidney is then seen, and immediately outside a bluish surface which is that of the intestine distended by meconium. By proceeding cautiously the operator is almost sure to open the colon without wounding the serous membrane. This modification of lumbar enterotomy recently introduced by M. Robert, will, we believe, cause it to be preferred to the operation in the groin recommended by Dr. Bodenhamer.

We cannot take our leave of this volume without expressing our great gratification, not only with the manner in which Dr. Bodenhamer has performed his task, but also at seeing the attention of the profession in this country thus directly called to this much neglected subject of malformation of the rectum. Not only are the great majority of medical men too ignorant of the whole subject, and totally unqualified to deal with the difficulties to be encountered in these unfortunate cases, but what is more, some of our most distinguished surgeons are to be found teaching in regard to them, doctrines, which we with difficulty can restrain ourselves from qualifying as we believe they deserve. The professor of surgery in Harvard University thinks it unnecessary to discuss the question of "eking out the life of a newborn baby by an artificial anus in the groin or back," and that it is better that a child born with an imperforate anus or rectum should die without operation; "although—he adds, and this aggravates the matter,—it must occasionally be performed in deference to established opinion."—(*Boston Med. and Surg. Journal*, Vol. lvii, Boston, 1858.) Dr. Gross is struck with astonishment "that any one, possessed of the proper feelings of humanity, should advocate a proceeding so fraught with danger, and followed, if successful, by such disgusting consequences."—(*A System of Surgery*, Vol. ii, p. 766, Philad. 1859.)

The savage who abandons his deformed offspring under a pile of stones is influenced by similar considerations; they are unworthy of our civilization as well as of our profession.

W. F. A.

III. *Researches upon the Venom of the Rattlesnake; With an Investigation of the Anatomy and Physiology of the Organs Concerned.* By S. WEIR MITCHELL, M. D., Lecturer on Anatomy and Physiology in the Philadelphia Medical Association. Washington City. Published by the Smithsonian Institution. 1861. Quarto, pp. 145.

The monograph which we take this occasion to bring under the notice of our readers is one which cannot fail to attract the attention of physiologists and other scientific men, and is one which undoubtedly will add to the already distinguished reputation of its author as a learned and pains-taking physiologist, a careful and accurate observer, and a conscientious relator of what his researches reveal to him. Dr. Mitchell belongs to that small group of physicians who are willing to undertake extensive observations not only with a view to the immediate practical application of the results obtained, but likewise for the promise which such results hold out of prospective benefit to man, and also (from what may in many respects be considered a still higher motive) a desire to extend our knowledge of the laws and operations of nature because such laws and operations are the evidence of the greatness and perfection of the Creator of nature.

Dr. Mitchell's memoir is one which every physician in this country who has any love for his profession should read, and we must therefore express our astonishment that as it was submitted to the American Medical Association in competition for its prize, it should have met with so little appreciation from a body supposed, however erroneously, to represent the medical profession of the United States. The committee remark, in their report upon prize essays, (after referring to an essay which contained no original matter,) "and the other though containing extensive and well conducted original researches gives so little prominence to the strictly medical portion of the subject that it hardly merits a place in the Transactions of this Association. The committee have therefore decided to award no prize."—(*Trans. Am. Med. Association*, 1860, p. 29.

Now the “other” above referred to is the memoir before us, and we do not hesitate to express our opinion that the action of the committee is calculated to react unfavorably not only on its members, but on the Association of which they were the organ. They have shown their ignorance of the value of physiological researches to practical medicine, their sciolism in not being able to comprehend the scope of Dr. Mitchell’s investigations, and their narrow-mindedness in thinking that because prominence was not given to the “strictly medical portion of the subject” the essay in question was not entitled to a place in the *Transactions*. We might be content if the consequences of their incapacity for the positions they occupied fell only upon themselves, but when we reflect that the Association which they represented is responsible for their action, our indignation changes to mortification, that a judgment so unworthy of a body pretending to a scientific status and to represent American medicine should have been awarded—and when we consider, in addition, how undignified and disreputable some of the matter is which this volume of the *Transactions* for 1860 contains, we would fain indulge the hope that the days of the Association, as at present constituted, are numbered, and that the profession of this country will no longer be dishonored and outraged by such disgraceful publications as this last.

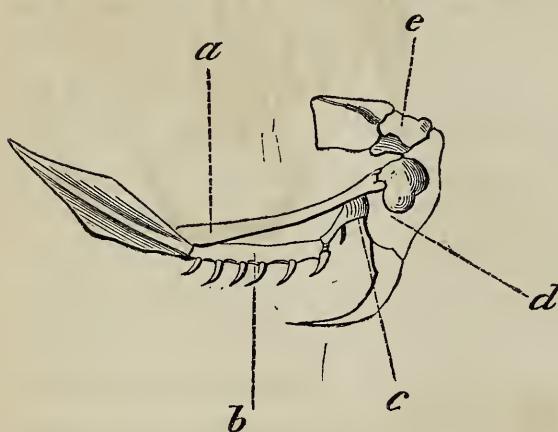
But to return to our original subject. As the “committee on prize essays” have not deemed Dr. Mitchell’s memoir fit to occupy a place in the *Transactions* we must endeavor so far as our limited space will allow to place an analysis of his labors before our readers.

The first chapter is devoted to “*Observations on the Habits of the Crotalus when in Captivity.*” Much interesting information is here given. Dr. Mitchell states that the rattlesnakes of the north generally live alone. Such is not the case with those of the west (*crotalus confluentus*). At the base of the Rocky Mountains they are found in large numbers, and almost always eight or ten may be discovered in a single hole. They generally make use of the holes dug by

the prairie dogs, driving these latter out. In riding over the extensive plain, at the eastern side of the Rocky Mountains, we have literally, seen hundreds in a day.

In the second chapter the anatomy of the venom apparatus is considered. We regret that we cannot quote Dr. Mitchell's descriptions in full. By means, however, of the accompanying wood cuts, we think our readers will obtain a correct idea of this interesting portion of the subject.

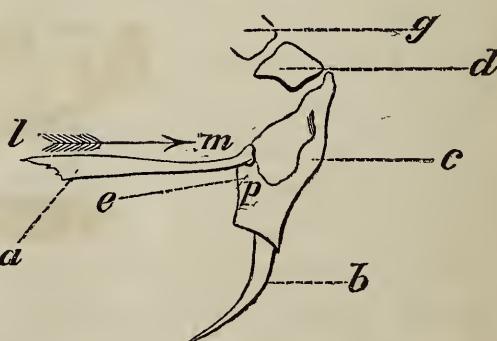
Fig. 1.



The elevation of the fang is affected by the external pterygoid bone being pushed against the superior maxillary bone. This latter articulates by a single joint with the lachrymal bone, and thus the fang is lifted up and pushed forwards preparatory to the snake striking. The action is well shown in the accompanying diagram

(fig. 2.) in which *a* is the external pterygoid bone; *l, m*, arrow marking the line of motion of this bone; *p, e*, external pterygoid muscle, by the action of which the fang is brought down again; *g*, frontal bone; *d*, lachrymal bone; *c*, superior maxillary bone; *b*, fang.

Fig. 2.



The *muscles* of the upper jaw and base of the skull are shown in fig. 3. Here *a*, indicates the situation of the spheno-pterygoid muscles, by the action of which on the pterygoid and palate bones the fang is elevated; *b*, the external pterygoid muscle—the retractor of the fang; *c*, the fascial sheath of this muscle attached to the capsule of the venom gland; *d*, the spheno-palatine muscles.

The temporal muscles, of which there are three, are shown in figs. 4 and 5. Of these the anterior temporal is that by which the poison gland is pressed upon.

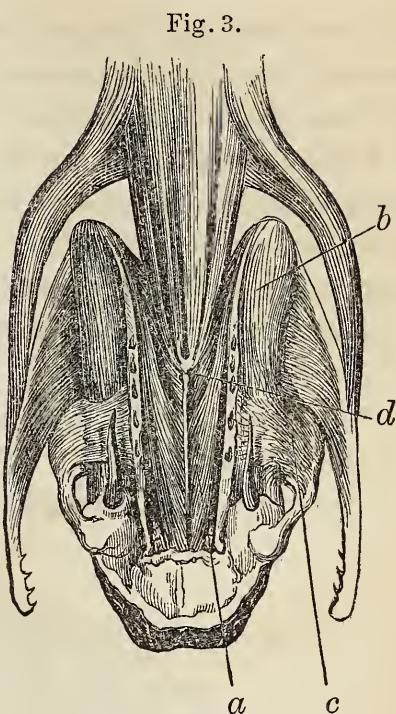


Fig. 3.

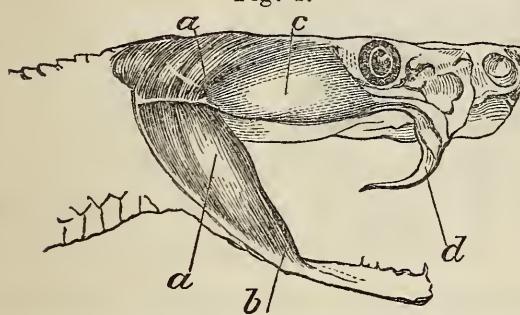


Fig. 4.

In fig. 4, *a—a* shows the situation of this muscle; *b*, its insertion into the lower jaw; *c*, venom gland; *d*, the fang half erected.

In fig. 5 we have the posterior temporal and other muscles shown. *a—a*, the gland; *b*, anterior temporal muscle; *c*, posterior temporal muscle; *d*, digastricus; *e*, posterior ligament of the sheath of the gland; *f*, vagina dentis—the fang slightly raised. The muscles shown in these figures are all elevators of the lower jaw, the anterior temporal, however, possessing the additional function of exerting pressure upon the poison gland.

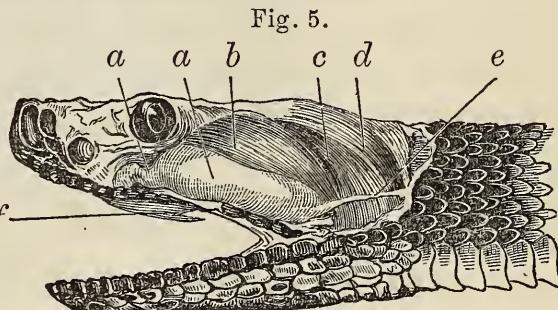
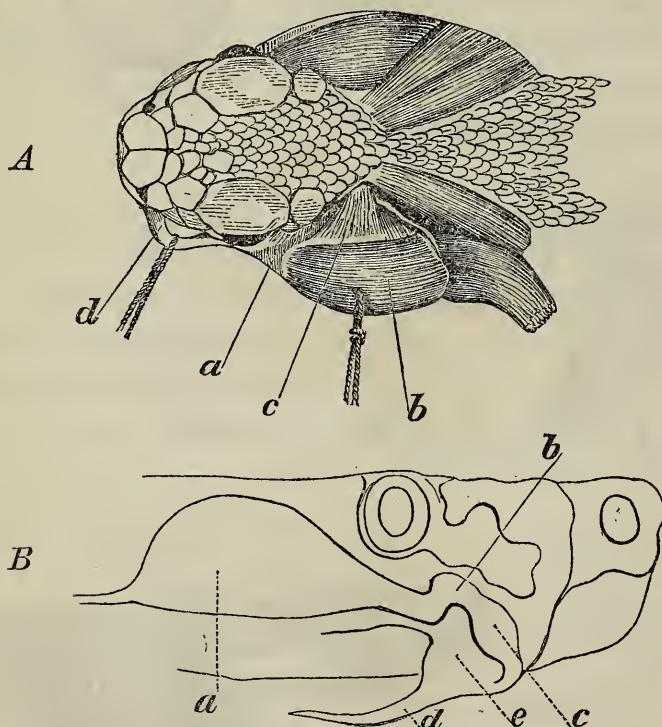


Fig. 5.

The secreting organ of the venom is a flattened, almond-shaped, oval gland, occupying as seen in the figures a position on the side of the head behind the eye. In a snake four feet long and weighing two pounds and two ounces, Dr. Mitchell found the length of the gland to be eight-tenths of an inch, its breadth nearly two-tenths of an inch, and its thickness about one tenth of an inch. His researches do not show that any definite relation exists between the size and weight of the snake and the weight of the gland. The latter, however, was as we should suppose larger in large snakes than in small ones.

Arising from the anterior extremity of the gland is the

Fig. 6.



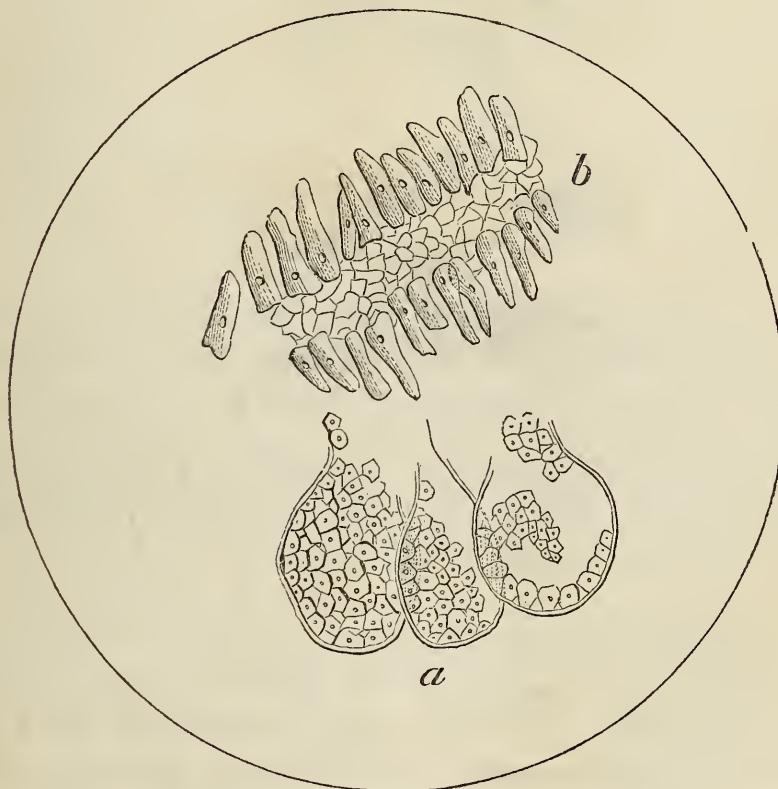
duct. In fig. 6, *A*, this is well seen—*a*, indicating the gland; *b*, the anterior temporal muscle; *c*, suspensory ligament of the gland extended; *d*, the duct drawn from its position in order to show it more distinctly. A side view of the parts is given in *B*, where *a*, is the gland; *b*, the duct at its curve; *c*, the sphincter; *d*, the fang; and *e*, the superior maxillary bone.

Dr. Mitchell shows that no sac exists for the retention of the venom. The enlargement shown in fig. 6, *B*, at *c*, is apparent only, and is due to a thickening of the wall at this position from an increased amount of white fibrous tissue and a layer of muscular fibre cells, to which we will come again directly.

In its minute anatomy the poison gland does not differ materially from the salivary glands of other animals. It is, therefore, a simple racemose gland, consisting of numerous cœca opening into small ducts and these terminating in larger ones.

An idea of the arrangement is obtained from a glance at figure 7 :

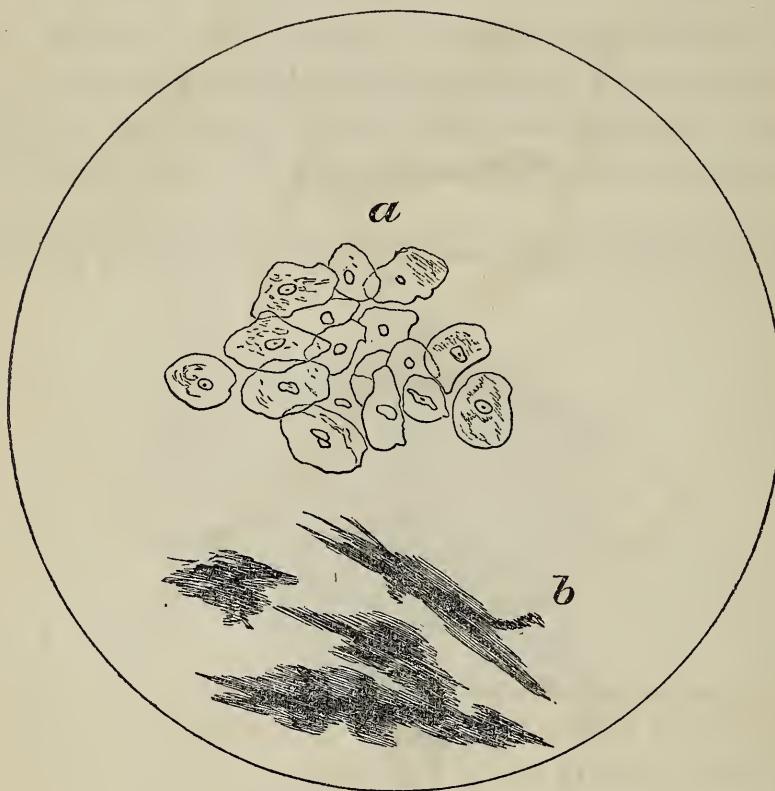
Fig. 7.



The cœca are lined with tessellated epithelium and the small tubes with columnar epithelium. On the other hand, the large duct is lined with pavement epithelium—fig. 8, *a*.

As Dr. Mitchell says, "This form of epithelia is not usually encountered in this position, in homologous glands, whose ducts are, on the contrary, covered internally with columnar epithelia."

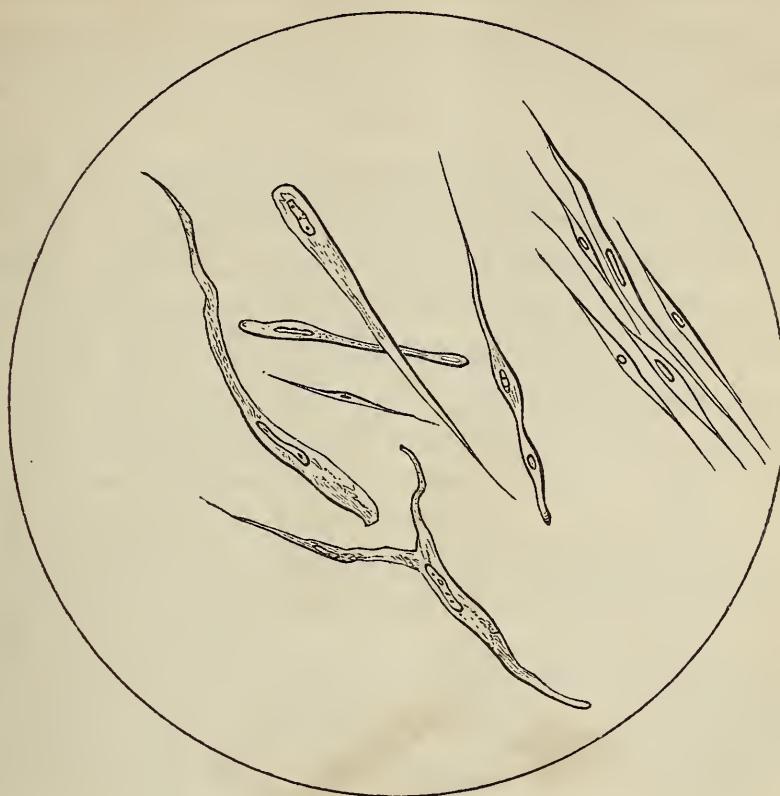
Fig. 8.



Exteriorly to this layer the poison duct consists of white fibrous tissue, with a small amount of yellow elastic tissue and an abundant supply of blood-vessels.

The enlarged portion of the duct, fig. 6, *B*, *c*, is as we have already stated marked by the presence of fusiform nucleated cells, shown in fig. 9, and which are doubtless muscular fibre cells. At this position, therefore, there is a sphincter controlling the flow of poison from the gland. This structure has never been noticed before Dr. Mitchell discovered it. Numerous pigment cells are also found in this situation—fig. 8, *b*.

Fig. 9.



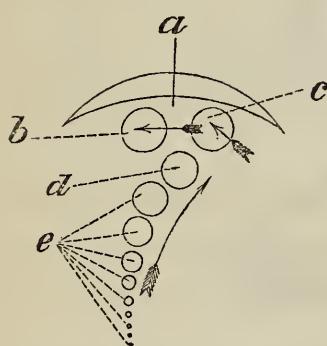
The duct terminates at the fang, and next we come to the description of this latter organ. Dr. Mitchell states that he has nothing here to add to Prof. Owen's account of the structure of the fang. In order to give a connected description, we quote a portion of Prof. Owen's remarks, referring our readers to his excellent little work on the Skeleton and Teeth for fuller details:

"To give an idea of the structure of this tooth, we may suppose a simple, slender tooth, like that of a *boa-constrictor*, to be flattened, and its edges then bent towards each other and soldered together, so as to form a tube open at both ends, and inclosing the end of the poison duct. The duct which conveys the poison, although it runs through the centre of the tooth, is really on the outside of the tooth. The bending of the dentine beyond it, begins a little beyond the base of the tooth, where the poison duct rests in a slight groove, or longitudinal indentation, on the convex side of

the fang; as it proceeds, it sinks deeper into the substance of the tooth and the sides of the groove meet and coalesce, so that the trace of the inflected fold ceases, in some species, to be perceptible to the naked eye, and the fang appears, as it is commonly described to be, perforated by the duct of the poison gland."

In regard to the development of the fangs Dr. Mitchell quotes the observations of Dr. C. Johnston, of this city, which the latter placed at his disposal. These researches show that there is a periodical fall of the fangs, the secondary fangs being placed in capsules at the bottom of the dens in the mucous membrane, where the functioning fangs lie.

Fig. 10.



The manner in which the secondary fangs come forward to take the place of those shed is shown in the accompanying figure, which represents a transverse section in diagram of the arrangements—*a*, being the alveolar socket; *b*, functioning fang; *c*, its successor; *d*, the next fang in order of age; and *e*, the remaining germs.

Dr. Johnston's researches also show that there is no direct connection between the anterior termination of the duct and the fang. The following extract embodies his views:

"The venom duct arising from the gland makes a bend upwards, immediately beneath the eye, then advances forwards under the skin as far as the crotaline fossette, and lying upon the maxilla externally, plunges downwards, and pierces the gum in front of the fang, where it terminates in a papilla, which projects slightly into the proximal aperture of the tooth. In this position, it is maintained by the gum which clasps the base laterally and in front, with considerable firmness, its inferior or distal edge, encompassing the annular enlargement already alluded to. Nor is there any other than a mediate application of the poison papilla against the fang, for as the whole venom canal of each tooth is really upon the outside of the organ, no special membrane lines it which might be continuous with the duct that discharges into the upper aperture.

"Such is the condition of things in an old fang, occupying its normal exterior position. But when the tooth drops out, or is broken, the gum is left entire; or, if its exodus has been forced, the gum escapes with laceration only. In either case, however, the gum remains as a barrier, limiting the progress of the advancing reserve fang; and while the latter is establishing itself provisionally, the gum encircles it, clasps it tenaciously, and brings the poison papilla in apposition with its dental aperture. As time passes, the new fang moves gradually outwards to its permanent seat; the inner maxillary recess is restored, and the first fang of reserve is again discovered on the inner side of its senior, resting with its pulp attachment in the bottom of the recess.

"Thus, the reserve fang has become an adult functioning fang, nor does its pulp relax its hold, until fate or mischance dislodge the now fatally-armed tooth which it animates."

This discovery of the non-continuity between the poison duct and the fang was likewise made independently by Prof. J. Wyman, of Boston.

The third chapter, relating to the *Physiological Mechanism of the Bite of the Crotalus*, we are obliged to pass over without further reference, although it contains a great deal of valuable and interesting information.

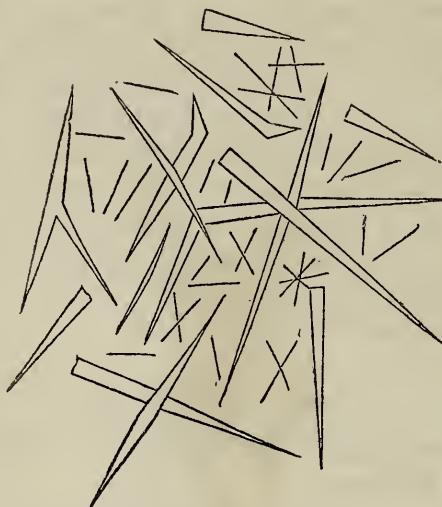
In the fourth chapter the *Physical and Chemical Characters of the Venom* are considered, and here we can only mention some of the conclusions at which Dr. Mitchell has arrived.

Amount of Venom.—Fifteen drops is the largest quantity Dr. M. has ever seen ejected from a single fang by natural process. The gland varies in capacity according to the size of the snake. In a serpent 18 inches long the gland held 11 drops of water, in one $49\frac{1}{2}$ inches in length the capacity of the gland was 29 drops.

The *color* of the venom varies from a pale emerald green to orange and straw color. It is always more or less glutinous, and devoid of taste and smell. We have frequently applied the venom of the *Crotalus confluentus* to the tongue without perceiving that it had any taste. In *reaction* it is acid. Dr. Mitchell was unable to obtain crystals from it.

We were fortunately more successful with the venom of the *C. confluentus*, obtaining by dilution and slow drying crystals of the forms shown in fig. 11.

Fig. 11.



As the result of a chemical examination Dr. Mitchell found that the venom of the *C. durissus* contained an albuminoid body (crotaline), another albuminoid compound, a coloring matter and an undetermined substance, a trace of fatty matter, and salts (chlorides and phosphates.) It was also ascertained that it possessed little power in converting starch into sugar.

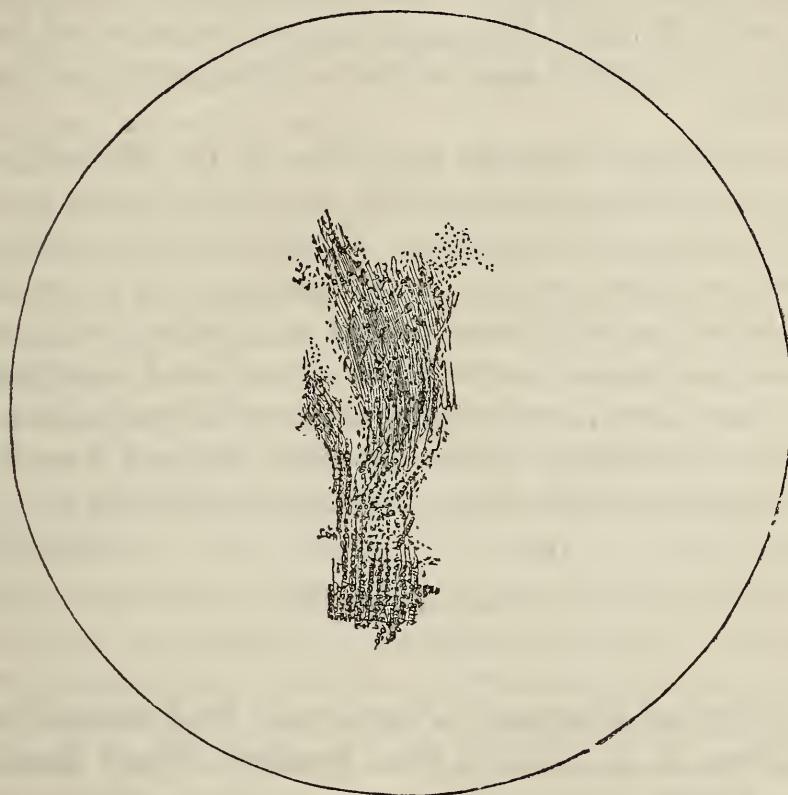
Numerous experiments are next given with reference to several important points, to which we regret we cannot make more extensive reference.

The fifth and sixth chapters are devoted to the consideration of the *Toxicology of the Venom of the Crotalus*, and numerous experiments are given with the view of showing its effects upon cold and warm blooded animals. Birds appear to be most susceptible to its influence, mammals next, and reptiles and other cold blooded animals least of all.

Dr. Mitchell found that the poison is not capable of being absorbed from the alimentary mucous membrane, confirming, therefore, the results arrived at by other physiologists. Its

action upon the muscular irritability is not decided, but upon the tissue of the muscle it is well marked, breaking it up into numerous minute granules.

Fig. 12.



The rhythm of the heart is disturbed by its influence, and the power of the organ, as determined by the cardiometer, very much lessened.

Several other interesting points are considered, which, however, we must pass over.

In chapter eighth the subject of *Crotalus Poisoning in Man* is brought under notice, and a table of sixteen cases in which the symptoms are well marked is given. Of these twelve recovered and four died.

Dr. Mitchell does not in this memoir dwell upon the antidotes, though all those which have been brought forward are alluded to. In a paper which he has published in the

March number of the *North American Medico-Chirurgical Review*, he has considered the subject at length, and at another time we may make further allusion to his labors in this direction.

In an appendix a very excellent synonymy of the crotalidae is given by Mr. E. D. Cope, a young but distinguished herpetologist; and a full and valuable bibliography is likewise appended.

We must now conclude our notice of Dr. Mitchell's memoir, and whilst regretting that our limited space has prevented us doing that justice to his labors to which they are entitled, we must not forget to thank him for the valuable addition he has made to anatomical and physiological science, an addition which honorable to himself and creditable to American science, loses none of its worth from the fact that the prize committee of the American Medical Association were incapable of perceiving its many excellencies.*

W. A. H.



IV. *Signs and Diseases of Pregnancy.* By THOMAS HAWKES TANNER, M. D., F.L.S., &c. London: Henry Renshaw. 8vo. p. 504.

To keep pace with the publications of the present day, one must not expect to follow the advice of Pliny "*Legere multum, non multæ.*" A subject is no sooner apparently exhausted by one author than another claims attention. In Professor W. F. Montgomery's work upon "The Signs and Symptoms of Pregnancy; with some other Papers on Subjects Connected with Midwifery," the profession had a right to hope that an authority was at length found, adequate to elucidate any obscure point which might arise in a condition, which, in a great majority of cases, is suf-

* NOTE.—We are indebted to Prof. Henry, the Secretary of the Smithsonian Institution, for the use of the wood cuts illustrating this review, and take this opportunity of expressing our high appreciation of his kindness.

ficiently easy to diagnosticate. It is, however, for these exceptional cases that the expert must prepare himself. So far as the Signs and Symptoms of Pregnancy are concerned, the two works elaborate in detail, and in like order, precisely the same points now condensed in most of the systems of midwifery. They differ considerably, however, in the subsequent chapters relating to the diseases incident to pregnancy and connected with tokology.

Dr. Tanner's work is completed in twelve chapters, in the first of which, consisting of 41 pages, under the caption of "General Observations on the State of Pregnancy, &c." We have a fair specimen of the employment of his "*horæ subsecivæ*," among many old dusty volumes as well as much miscellaneous modern reading. If his readers do not find a great amount of valuable information therein, they can at least select many improbable stories related in an entertaining style with their probable sources of fallacies pointed out. As instances of the credulity of a past age, such pictures amuse, but convey no information, and therefore might well be allowed to remain upon the original records. To continue reprinting for the use of the profession at the present day, such stories, from the works of that famous Chirurgeon, Ambrose Paré, as that "Margaret, Countess of Holland, was in the year 1773, brought to bed of 365 chiloen at one and the same time;" or, from another author, "that the estimable Bishop Otho baptized one thousand five hundred and fourteen children, the miraculous offspring of his niece at one birth," (p. 16) is no better than would be the custom of filling our philosophic volumes with extracts from Judge Edmonds and Professor Hare, concerning the vagaries of table-movings and spiritual manifestations. It will be admitted with the author that "the simple prelate (Otho) may have performed the sacred rite on a large bunch of vesicular hydatids, but when he informs us that "it was, and perhaps is still, a doctrine of the church of Rome, that the ovum becomes a fit subject for baptism as early as the fortieth day after conception," (p. 17) we learn that of which we were

before profoundly ignorant; and further investigation upon the subject proves to us that he has failed to draw the distinction between an opinion and a doctrine. Nor are we seriously affected by the author's fear (p. 24) "that there seems to be a chance of the old, ridiculous, and perhaps disgusting notions of the ancients being temporarily revived in the present day." Concerning the diagnosis of the sex of the foetus and the procreation of either sex at will, other passages in this chapter will strike the reader with some surprise, and we have only commented upon it in this manner with a hope that those striving after more exact knowledge with the microscope and other means of modern physiological research, may be relieved hereafter from a too constant repetition of the crude conjectures and extravagant theories which were sufficient for an age when these sources of knowledge were unknown.

In chapter ii. on "The Signs and Symptoms of Pregnancy," a general review is taken of the classification adopted by different authors, and concludes as follows, in language with which we perfectly agree:

"In the daily practice of the obstetrical portion of his profession, the physician must have his knowledge so arranged in his mind—so in every sense at his fingers ends—that he can immediately apply it to the particular case before him; and this will be best accomplished by each one making himself fully acquainted with the subject in all its bearings, and then, if he should find it necessary, forming such divisions and sub-divisions as the bent of his own judgment will readily suggest."

The order in which the symptoms of pregnancy are considered *seriatim* is as follows:—Suppression of the catamenia—nausea and vomiting—diarrhoea and salivation—mammary sympathies—the areola. Enlargement of the abdomen—position of the uterus at different periods of pregnancy—movements of the foetus—quickenings and its causes. Changes in the uterus—dimensions of this organ at the various months. Ballottement or repercussion. Signs derived from auscultation

tion—the foetal movements—the funic pulsations and funic souffle—the uterine souffle—the foetal heart. Kiestein—contractile power of the gravid uterus—discoloration of vagina—examination of the blood—the vaginal mucus—shape of the os uteri—vaginal pulse—occipital headache—certain physical and moral changes, which latter are collected from various sources and only serve to prove the truth of the authors remark in relation to them, (p. 124). “Hence it can only be said as the result of the examination of a large number of women in different stations of life, that pregnancy very commonly exalts the general sensibility, and predisposes to the development of nervous disorders in all their protean varieties.”

Contrary to the general truth of the oft-repeated lines of Horace—

“*Segnius irritant animos demissa per aures,
Quam quæ sunt oculis subjecta fidelibus.*”

we are at last indebted to the author of the imperishable treatise “*De l’ Auscultation Mediate,*” for the only certain evidence of pregnancy. But no one symptom is more fallacious, and none more invariably appealed to, than the areola. In making this remark, we only express the real difficulties to be encountered in actual daily practice. Those who have been accustomed to observe the differences presented by the areola in the unimpregnated, can form a good idea of the fallaciousness of this sign. It must be remembered, that the physician often has to judge of this symptom upon seeing the patient for the first time, without being familiar with the previous appearance of the breast, when analogies of women having similar temperaments and the same shades and textures of skin do not serve him. The differences in the appearance of the areola in the unimpregnated female seem to depend upon other causes than those mentioned. The health of the individual—the condition of the blood as regards anemia—and the development of the mammae—all have an effect. Dr. Montgomery devotes twelve pages to this symptom alone, and although Dr. Hambleton declared “the areola connected with pregnancy can always be distin-

guished by an experienced eye," and that it is "the chief cognizable sign of pregnancy in the early months," yet we have known suspicion to be thrown by diligent experts, upon innocent females, owing to the general appearance, and particularly the depth of color around the nipple at the time of examination. In negro women the areola becomes jet black with somewhat of a purple shade through it; in the albino, it is of a delicate rose color. How is it in the mulatto? In them all appearances derived from the color of the skin are difficult to appreciate. This difficulty exists in the early diagnosis of the eruptive fevers—particularly scarlet fever. The depth of color around the nipple in the unimpregnated varies with the color of the pigment of the individual—the nearer allied to the negro, the darker the color. As a race, they are supposed to be voluptuous and incontinent, the mammary glands are largely developed, and as they are frequently presented to the physician in this part of the world for an opinion upon this point, we hope these remarks will not be considered misapplied.

Interesting chapters follow upon diseases which simulate pregnancy—the duration of pregnancy—the premature expulsion of the foetus—the examination of substances expelled from the uterus, &c. Extra-uterine gestation. Superfoetation—the diseases which may co-exist with pregnancy—the sympathetic disorders of pregnancy—the diseases of the urinary and generative organs—and the displacements of the gravid uterus. Sprightliness of style and interesting narrative are maintained throughout, and the over-worked practitioner, exhausted student, or general reader, having the work in his library, will always find an agreeable companion wherewith to employ his hours of leisure with pleasure and profit. Dr. Tanner has shown himself to be a careful student of American literature, and we were glad to re-peruse many familiar cases, amongst which we might instance from our immediate neighborhood, that of the male wet-nurse exhibited to the obstetrical class of the University of Maryland, by Prof. Hall, together with the cases of Drs. T. B. Taylor, W. L. Atlee, Craighead, M. L. Weems, Storer, &c.

Where the causes of the phenomena under consideration are not definitely established, the author has availed himself of his varied reading, oftentimes of rare works, to add interest to his own pages. We cannot forbear quoting in this connection, the poetic idea of the orientals concerning the cause of labor. It is a development of the doctrine of Avicenna, "that at the appointed season labor comes on by the command of God." According to the Hindu Medical Shástras, (quoted from Dr. T. A. Wise) "at the tenth month the foetus acquires knowledge and prays to God, and sees the seven heavens, the earth, and the inferior regions. By the air of the pelvis (*opana vayu*) the foetus is then expelled, as an arrow is shot from a bow, and the child falls insensible to the ground. All his former knowledge is immediately forgotten, and in loosing so many pleasing illusions, he cries."

The entire volume is illustrated by cases which have been selected for the most part from good authorities, and with certain exceptions, are practical and interesting cases of every day occurrence, best illustrating the laws which govern the subjects treated of in this work, and adding life and interest to the study. It would be quite impossible within our present limits to follow Dr. Tanner in his controversies, for example, upon superfœtation, uræmic eclampsia, &c., but everywhere the most modern views, which of course, may undergo change in subsequent editions, according to the advance of science, are clearly stated and impartially given. We are told, in conclusion, that the author was encouraged throughout his labor by the hope of producing a useful work, and we congratulate him upon the success of his effort; the pleasure in reading it is enhanced by the excellence of both paper and printing.

We have not deemed it necessary to bring all the points which Dr. Tanner has considered before our readers. We can assure them, however, that he has omitted nothing of importance relative to the subjects of his treatise, and we therefore do not hesitate to commend his volume as one every way worthy of their confidence.

W. C. V. B.

V. *A Compendium of Human Histology.* By C. MOREL, Professor Agrégé à la Faculté de Medicine de Strasbourg. Illustrated by twenty-eight plates. Translated and edited by W. H. VAN BUREN, M. D., Professor of General and Descriptive Anatomy in the University of New York, &c., &c. New York: Bailliére Brothers. 1861.—8vo., p. 207.

The growing demand for works on minute anatomy is certainly to be regarded as a favorable sign by those who seek to elevate the standard of medical education above the low point at which it has generally been placed in this country. The science of histology, which a few years since was scarcely touched upon in our medical schools, now forms a considerable portion of the course of instruction, and the microscope has become a familiar instrument to the student.

Minute anatomy must ever be intimately connected with physiology and pathology. How is it possible, for instance, for the physiologist to be acquainted in detail with the function of the kidneys without a knowledge of the connection of the capillaries with the Malpighian corpuscles and of these with the uriniferous tubules? Or, how can the pathologist positively determine the existence of Bright's disease unless able to recognize the appearances presented by the casts of these renal tubules?

In M. Morel's book we do not find anything new; on the contrary, we discover many deficiencies—many instances where accepted facts are passed over in silence; yet, withal, we cannot withhold our recommendation from it as a good book to be placed in the hands of the student, to be *replaced*, however, by a better one, if he wishes to become thoroughly conversant with the science of histology.

Prof. Van Buren has ably and gracefully accomplished the task he set for himself, and has in several instances supplied the matter which the author in his ignorance or negligence has omitted. We had perhaps better close this notice, as we feel that we are losing our temper at reflecting that M. Morel

disdains to mention Bowman or Isaacs in his account of the kidney; Kiernan, Lereboullet, Leidy, or Beale, in his remarks on the liver, or Sanders, Gerlach, or Gray, in his description of the spleen.

W. A. H.

VI. *A Description of the Human Body; Its Structure and Functions.* Illustrated by nine Physiological Diagrams, containing one hundred and ninety-three Colored Figures; designed for the use of Teachers in Schools and Young Men destined for the Medical Profession, and for Popular Instruction Generally. By JOHN MARSHALL, F.R.S., F. R.C.S., Surgeon to the University College Hospital, London, &c. &c. In two volumes. Vol. I, Text; Vol. II, Plates. London. Day & Son. Quarto, pp. 260.

The work, the title of which we have given above, is one well calculated to be of great service in the cause of education. It is lamentable to think that whilst educated men deem it important to be acquainted with the principles of most of the arts and sciences, they should generally be so deplorably ignorant of those sciences which most intimately concern their anatomy and physiology. We have known men of acknowledged intellectual attainments, men occupying high positions in the councils of the nation, who could not tell whether the liver was on the right or left side, and who were ignorant of the existence of such an organ as the pancreas. For our part we think there is something wrong about the mental constitution of such individuals, and whilst we do not think that all men should be able "at five minutes notice to play whipper-in to the House of Commons, sail the channel fleet or cut for stone," we do think that every educated gentleman should be generally conversant with the structure and functions of his own body. To all those who desire to acquire this information in a pleasant and easy manner we recommend Mr. Marshall's treatise. It is a good

deal better than the school-girl works which have hitherto been published on the subjects to which it relates, and would be of much service to students of medicine as a preparatory volume.

The plates are excellent and numerous.

We should be glad to see Mr. Marshall's book placed more at the command of our people by a republication, and we cannot but think it would be worth while for some of our publishing houses to take the matter in hand.

W. A. H.

VII. *A Treatise on Fever; Its Cause, Phenomena, and Treatment, with an Appendix Containing Views on Some Female Diseases, Some Diseases of Children, etc* By REZIN THOMPSON, M. D., Nashville, Tenn. Nashville: Published by the author, 1860.—p. 448, &c., 12mo.

Tantumne auditor? Certainly not Dr. Thompson,—this is a country where the most perfect liberty is allowed every one to talk or write any amount of nonsense he pleases, and there is no reason why you should be obliged to listen to the blatant noises of common quacks, boasting of the value of their secret remedies, without being allowed an opportunity of puffing your own *fever syrup*. This syrup is the great curative agent of fevers, and why should'nt a nice little book crystallize around such a happy discovery as a nucleus? The author has some peculiar notions as to the cause of idiopathic fevers, which he believes "is a something possessing the property of a narcotic poison," and, by a course of reasoning peculiar to himself, arrives at the conclusion that "oil of sassafras would destroy or counteract, or neutralize it." As it is necessary "to allay the disturbance in the nervous system," of course, valerian must be employed; "to restore the action of the capillaries," piperin is brought into requisition, &c. From these valuable conclusions he contrives the formula for the "*fever syrup*," and it seems to constitute the quintessence

of the means which the author employs "to subdue the most potent enemy that has ever assailed our race, and with them I have succeeded, not occasionally, not generally, but uniformly and promptly."

The book is dedicated to Dr. Bowling, of Tenn., who in a long notice of the first edition, appended to the third, certifies to the author's "possession of talents of the highest order," and says that he "delights in groping for the lost ends of febrile inquiry in the long and tenebrious night during which they have reposed in their dark abodes." All of which—especially the *groping*—is particularly evident to any one who will glance over the book.

L. H. S.

SELECTIONS.

I. *On What is Commonly Called "Rigidity of the Os Uteri."*

CHAS. D. ARNOTT, M. D., Edin., &c.

Amongst the many causes of delay and difficulty in human parturition, abnormal conditions opposing the completion of the preparatory process in the maternal passages for the descent of the foetus, are of frequent occurrence. Obstetric writers recognise one of these as claiming paramount importance, and describe it under the term, "rigidity of the os uteri."

The following brief outline may serve as an illustration of a case often met with in practice. A patient is in labour with her first child, and has been so many hours. The pains have been regular, have gradually increased in severity, and have now reached such intensity, that the nurse and friends are assured the necessary assistance only is needed to effect speedy delivery. Upon arrival, the medical attendant can but be similarly impressed; the pains recur regularly, are strong, and present all the characters of the genuine expulsive efforts,

the last in the train. Digital examination reveals the following conditions :—Vaginal passage dry and tight; os uteri barely within reach, high up posteriorly, a mere slit like a button-hole, scarcely admitting the finger's point; the foetal head low down anteriorly, pushing before it a large segment of uterine tissue, and under the influence of each pain apparently making ineffectual efforts to force its way through this evident source of obstruction. Under these circumstances, inexpressibly unhappy, the labour, without adequate assistance, must inevitably persist for hours, perhaps even for days.

This is a correct delineation of those cases which are described as depending upon rigidity of the os uteri; but, as I apprehend, improperly so. In the great majority, the os is, in reality, dilatable enough, but some of the chief elements of dilatation are acting disadvantageously, or not at all. The fluid wedge, for instance, is generally absent, the membranes having ruptured early under the influence of the strong uterine contractions, and the foetal head is expending all its force in a wrong direction, not upon the os uteri, as occurs under normal conditions, but upon that shelf of uterine texture it has infringed upon, and which so long must successfully resist it.

The treatment of these cases the teachings of the schools has hitherto inculcated, I am now fully convinced, is not only inert, but highly injudicious. Bloodletting and antimonial depressants (time-honored maids-of-all-work) have been loudly extolled as adjuvants of vital dilatability, and almost implicitly relied on. Anodynes (learnedly) to lull excessive irritability, (truthfully) a clumsy excuse to gain time, have also had their share of renown, and these again are now likely to be superseded by a more potent agent, chloroform.*

I shall not discuss in full the merits of these plans of treatment. I am, from repeated experience, as fully convinced as I ever can be, of any one professional fact, not only that they are of no use whatever, but that they are positively and highly injurious. My opinion is confirmed, that the effectual treatment of these cases is by surgery alone; reduction and dilatation of the abnormally placed os by manipulation, and

* See a graphically detailed and characteristic case, published in THE LANCET (Vol. 1, 1860, page 397,) by F. Dumaresque Ross, Esq., Guildford, in which he expresses much satisfaction from its use, although the account shows the labour persisted twenty-five anxious hours after its employment.

in the more aggravated and resisting cases, incision of the opposing texture. Much good service may, indeed, thus be rendered, a great amount of maternal suffering saved, and infantile life preserved.

Free lubrication of the parts having been premised, the finger is to be introduced during each pain, and the os solicited downwards and forwards, and at the same time freely dilated without any unjustifiable force. As with the prostate after the deep incision in lithotomy, so with the os in the great majority of these cases, it will be found to yield readily. Improvement commences forthwith, and all difficulty is soon overcome. In the very rare minority, incision (mere notching with a guarded probe-pointed bistoury) may be requisite in addition to manipulation, and the most intractable cases are speedily made to assume a totally different and more promising life aspect.

I am aware the proposal seems harsh, and may be denounced by the *laisser aller* school as belonging to that confessedly bad category, "meddlesome" midwifery. I believe, however, it may be fully proved undeserving any such epithet, by the remembrance that there are cases which tax our resources to the highest extent, from the extreme anxiety generally pertaining to them, and the inefficacy of the means usually employed for their relief; and further justified by the great fact of its being merely a close imitation of Nature's own *modus operandi* under these special circumstances.

Let us briefly inquire how this difficulty is ordinarily surmounted by Nature's efforts when unaided? Almost always, as all observant practitioners have again and again experienced, by spontaneous laceration, sometimes rather extensive, of the resisting uterine tissues; and, in spite of bloodletting, antimonials, and all other such auxiliaries, as they are inaccurately termed, scarcely ever, until this is accomplished, can she complete the process. Instances in which very extensive rupture ensues, are, with this concomitant complication, not uncommon; and many so-called cases of occlusion of the os uteri, in which incision is the only alternative, Nature having failed in effecting the necessary laceration, are probably often little more than extreme cases of the description we are now considering, in which the os, being more out of reach than usual, escaped detection.

I have employed the practice now recommended for many years, and on many occasions I have satisfied myself of its invariable and great utility; moreover, having never ob-

served one untoward sequence from its employment, I conclude it may be regarded almost entirely free from danger. Let it but have a fair unprejudiced trial, and I feel assured it will so forcibly commend itself, as to assert its superiority over all other expedients.

CHRONICLE OF MEDICAL SCIENCE.

I.—MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *A Case of Epilepsy, in which Attacks of Unmeaning Laughter, Tetanoid Spasm, and Peculiar Rotatory Movements Occurred.* By G. E. PAGET, M. D., Cambridge.

This highly interesting communication, which was originally read at Cambridge, accompanied by certain commentaries, is reprinted from the *British Medical Journal*. The case was that of a laboring man, aged twenty, who had been under observation, more or less, since July, 1856, at which date he had for a few weeks only been the subject of ordinary but severe epileptic attacks, which, however, occasionally came on in "groups" or "paroxysms." But prior to the invasion of the regular epileptic attacks he had been for eight or nine months subject to "frequent bursts of unmeaning laughter," which came on day after day, lasting about a minute. They were evidently quite involuntary, and took place without apparent cause, and came on also frequently during sleep. These attacks were not, like ordinary laughter, excited by something ludicrous, but it was quite clear that they were unconnected with any pleasing emotion or idea. They were after a time often accompanied by dancing movements, which along with the laughter, would stop when his attention was arrested by calling. He had been wont to pass his urine during these laughing attacks. At one time, also, he suffered from frequent spasms, resembling those of tetanus, the

back being bent as in opisthotonus, during which time he retained his consciousness, and between the spasms he was wont to be very excited, and obtained relief by walking about, drinking and washing with cold water. In August, 1857, he became subject to attacks of rolling or turning on his own axis, chiefly from right to left, during which he neither lost consciousness nor became giddy. These rotatory movements could be restrained by moderate force. They were generally followed by flatulent eructations. Subsequent to this his temper became altered, and he became very obstinate and self-willed.

In his remarks or commentaries the author shows, by reasons which space precludes our adducing, that the attacks of spasmodyc laughter were essentially abortive epileptic fits. He quotes a case related by Billod (*Annales Médico-Psychologiques*, tom. ii. 1843)—the only one which he knows of—in which epileptic fits assumed the laughing form, and remarks truly that it is singular that such cases are so rare, considering the close relation between epilepsy and hysteria, the latter of which is so often attended by spasmodyc laughter. Dr. Paget discriminates between the above class of cases and those in which laughter occurred in epilepsy, not in “spontaneous fits, but excited by very slight causes, the only deviation from the normal state consisting in a proclivity to laughter far greater than was natural.”

The author quotes several cases in which unwonted laughter and peculiar movements like those of the cases adduced accompanied various diseases. He concludes by stating that for some months both the regular and the laughing attacks had been preceded invariably by an aura, which commenced below the navel and rose to the throat when the attacks came on. Dr. Paget thinks that most good has been effected in the way of treatment by blisters to the region of the navel and the use of valerianate of zinc and henbane; and latterly by bismuth and magnesia.—*Br. and For. Med.-Chir. Rev.*

2. Estimate of Chloroform. By Professor PARAVICCINI.

Prof. Paravicini, giving an account of the events at the Military Hospital at Milan, during the late Italian war, after describing the benefit derived from the use of chloroform, thus sums up his opinion as to the propriety of its employment:—1. Considering the matter in a general way, the benefit of anæsthetics is too great for its employment to be

proscribed, to the damage of mankind at large, for the sake of the prevention of some distant danger which may occur to an individual. 2. While it is certain that chloroform has given rise to some deaths, it is no less so that many other cases would never have recovered without its aid. 3. Prior to the introduction of this agent, many pusillanimous patients preferred certain death to the pain of the Surgeon's knife. 4. The cases were by no means rare in which persons, persuaded at last to submit to operations, succumbed either during their performance, or a few hours afterwards, the moral effort and the physical sufferings exhausting their nervous power. 5. If we are to proscribe a means which, in the vast majority of cases, is of incontestable and immense utility, because in certain very rare instances it may prove fatal, we shall be led to the most ridiculous conclusions, first among which is the proscription of Medicine itself, and still more of Surgery. 8. A simple venesection, executed according to the rules of art, has given rise to fatal phlebitis much oftener than chloroform has led to death ; but who is there with common sense that would think of passing a general incrimination and prohibition of it?—*Annali Omodei*, Vol. clxxii. p. 196.

3. *Acetate of Lead in Pneumonia.* By Professor STROHL, of Strasbourg.

Dr. Strohl has come, after trying various remedies, to the conclusion that the acetate of lead given in full doses is the best of any. When there is plethora he bleeds once, but seldom twice, and when this is absent he only cups or applies some leeches. Soon after the acetate has been commenced the pulse diminishes in frequency ; but the local symptoms for a while continue to extend, but this is only for a time, after which they ameliorate and the acetate should be suspended. Convalescence takes place at the end of from five to twelve days, but it is a very complete one, the strength rapidly returning. This treatment is suitable for all the forms of pneumonia, and for all ages at which these appear.—*Gaz. des Hôp.*, 1861, No. 1.

4. *Puerperal Vaginitis.*

M. Beau draws attention to a severe form of vaginitis which is sometimes met with supervening on the puerperal condition, which may readily be mistaken for gonorrhœal dis-

charge. It is not very rare, and the women have some difficulty in getting their account of its origin believed. M. Beau, by careful observation, has satisfied himself of the purely puerperal character of the discharge. Like gonorrhœal discharge, it resists treatment obstinately. He finds a solution of nitrate of silver to be the best application.—*Ibid.*, 1860, No. 147.

5. On Saccharate of Colchicum.

That Colchicum is so frequently found inefficient in cases of articular rheumatism and gout, Dr. Joyeux regards as due mostly to the use of an improper preparation. He considers colchicum "as certain a specific in gout and acute articular rheumatism, as iodine in goitre, and iron in chlorosis." The best and most uniform preparations are the fresh juice rubbed up in the proportion of one to five with sugar, and dried in vacuo; or 2, an extract obtained from the fresh juice by evaporation in vacuo. The former preparation he prefers for internal use, giving, as an average dose, four grammes (3*i*) daily, in ten divided doses, while he employs the extract to rub on the painful parts. Giving such divided doses prevents all irritation of the bowels and diarrœa, which so many consider as inseparable from the effects of the remedy. Attacks of gout so treated yield, at the latest, in two or three days; acute articular rheumatism after fourteen to twenty days. In cases of subacute rheumatism, the remedy is not so efficient, though it usually gives considerable relief.—*Gaz. des Hôpitaux*.

6. Onychomycosis.

Professor Virchow exhibited to the Berlin Medical Society a specimen of a nail affected with what he terms *onychomycosis*. It consists of a vegetable parasite, first described as affecting the finger-nail by Meissner, and very frequently observed by Virchow, at Wurzburg, in the nail of the great toe. It occurs far less frequently in Berlin. The preparation exhibits the characteristic white appearance of the surface of the nail, due to the presence of a fungus situated deeply at the bottom of the nail. It resembles *porrigo favosa*, but is not identical with it, porrigo of the nail being less deeply placed than onychomycosis.—*Deutsche Klinik*, No. 38.

7. Arsenic in Apoplectic Congestion.

M. Lamare Picquot, physician to the Honfleur Hospital, as the result of ten years' observation and trial upon between forty and fifty cases, including his own among them, strongly recommends the prolonged use of arsenic as an effectual means of subduing congestion likely to give rise to apoplexy. In very urgent cases in which haemorrhage seems imminent, he precedes its employment by a moderate venesection, but this is quite exceptional. In proportion to the severity and menacing danger of the case the dose requires to be larger; and although, even after a month, benefit may already result, to be of permanent benefit it will have to be continued for several months. The more urgent the case, the more tolerant does the system become of the arsenic. The author, regarding apoplexy as consisting essentially in an excessive increase of globules of the blood, employs arsenic as a powerful agent for decreasing these, as well as the plasticity of the blood. It becomes, of course, necessary to assure oneself in a given case of the richness of the blood, for to employ arsenic when the blood is impoverished would be to do mischief. The author has generally found the dose of one-fifteenth to one-sixth of a grain per diem sufficient.—*Bull. de Thérap.*, tome lvii. pp. 193—252.

8. Metallic Iron in Chlorosis and Anæmia.

Feldmann and Pfeiffer give the following formula for an aromatic powder of iron:—R. Ferri Limatur 6 parts, Pulv. Aromat. (Pharm. Wurtt.) 4 parts, M.

The *Pulvis aromaticus* of the Wurtemberg pharmacopæia consists of—Cort. Canellæ 4 parts, caryophyllum, Macis, Myristicæ, Zingiberis, &c. 1 part. M. The dose of the iron-powder is about six grains at meal-times.

9. Mixture in Uterine Phlebitis and Puerperal Inflammations.

Dr. Sébastien prescribes the following mixture, to which he attributes the successful issue of 287 obstetric cases, in hospital as well as private practice. Take of nitrate of potassa 1 gramme, tincture of arnica 4 grammes, syrup of gum arabic 50 grammes, water 300 grammes.—M. A tablespoonful every hour.—*Gaz. des Hôpitaux*.

10. On the Therapeutical Effect of Bromide of Potassium.

Dr. Pfeiffer, of Paris, has confirmed by his researches the opinions of other physicians as to the sedative effects of bromide of potassium over the generative organs; he has found that the salt possesses a decided power of modifying abnormal erections and diminishing the frequency of seminal discharges. He has arrived at the conclusion that bromide of potassium exercises a special influence over the muscular part of the genito-urinary apparatus, and at the same time induces a characteristic modification of the secreting functions of these organs. Dr. Pfeiffer has administered it also with success in neuralgia of the neck of the bladder. He commences with the dose of half a centigramme every day, and increases it gradually up to two grammes a day.—*Chemical Gazette*.

11. On the Employment of Iodide of Ammonium in Constitutional Syphilis.

Dr. Gamberini, of Bologna, relates fourteen cases treated by iodide of ammonium, and he draws the conclusion that this agent is a prompt and efficacious remedy in all those cases in which the iodides of potassium and sodium are usually employed. He considers the iodide of ammonium to be preferable to the other iodides, because while effecting the same results it has the advantage of acting more rapidly, and also because strong doses of iodide of potassium or sodium are required to obtain results which are secured by a very small dose of iodide of ammonium. The terminal dose of the latter being the same as the commencing dose of the other iodides, the expense of treatment is very considerably reduced.—*Chemical Gazette*.

12. On the Efficacy of Digitalis and Quinia in the Treatment of Hemicrania.

Dr. Debout, who has very severely suffered for many years from attacks of hemicrania, testifies to the efficacy of the combined use of sulphate of quinia and powder of digitalis in the treatment of this complaint. The proportions employed are three grammes (about three-fourths of a drachm) of sulphate of quinia, and one and-a-half gramme of powdered digitalis, made into thirty pills, of which one is to be taken every night at bedtime for at least three months. From the beneficial effects produced on himself, Dr. Debout prescribed the same treatment for several patients, and the results, in many cases were equally satisfactory.—*Chemical Gazette*.

II.—SURGICAL PATHOLOGY AND OPERATIONS.

1. *On the Diagnosis of Dislocations of the Shoulder.* By M. MAISONNEUVE. (*Moniteur des Sciences Médicales*, No. 122.)

It very often happens, M. Maisonneuve observed, in a recent clinical lecture, that even experienced surgeons may hesitate respecting the existence of a luxation of the shoulder; and you are aware of the learned dissertations to which the differential diagnosis of these luxations, fractures of the neck of the humerus, and even simple contusion, has given rise to. Numerous are the pages, even in the most recent works, devoted to this important discussion; and certainly, after reading and meditating upon them, one can but be persuaded that this diagnosis is one of the most delicate and difficult in surgery. This does not arise from the enumeration of the characteristic symptoms of each lesion being incomplete. Far from it; for real and doubtful symptoms, vague and precise symptoms, are so accumulated that even the most skillful can scarcely make them out, while the simple practitioner is utterly at a loss. Still there is a simple and easily discovered symptom, which will always enable you to recognise with certainty not only this but any other dislocation, whatever swelling of the surrounding soft parts may exist. This symptom is based upon the fact that *in all dislocations the normal movements are impeded or abolished*, while in simple contusion these movements persist, and in fractures others of an unusual nature are added to them. Take hold of the arm and endeavor to make it execute the movements proper to the articulation. If these are found to be impossible, or very limited, there is without doubt dislocation; while if these remain intact, no luxation exists, and the presence or absence of shortening and crepitation will determine whether the accident is a fracture or a mere contusion. This sign alone will enable the diagnosis of the dislocation to be made. The study of the symptoms may be carried farther, and analyzed in detail. We may verify the flattening and the depressibility of the shoulder, the projection of the head of the humerus, the elongation of the limb, and the various circumstances which determine the variety of the dislocation. But the mere fact of the abolition of the movements of the joint had already placed the fact of the dislocation beyond all doubt.
Br. and For. Med.-Chir. Review.

2. *Vaccination in Nævus.*

M. Nélaton strongly blames the ordinary mode of performing this, which consists in vaccinating with the point of a lancet. Scarcely has the instrument penetrated the epidermis, than a considerable flow of blood takes place from the surface of the erectile tissue, effectually washing away most or all of the virus. To obviate this inconvenience M. Nélaton resorts to one of the following procedures :—1. He takes the finest insect needles which can be procured, and charges the point with virus direct from a child's arm, and having passed it in, he leaves it *in situ*, for some instants, until the tissues have had time to become thoroughly impregnated with the virus, after which he withdraws it. In this way it has acted as a plug, preventing the exit of either blood or virus. The needles inserted should be separated by a space of one or two centimetres from each other. 2. This is a somewhat longer and more complicated procedure, but it has the advantage of not leaving cicatrices. Setons are first applied at the base of the tumor, and left *in situ* for a week. In this way fistulous tracks are obtained, through which threads are passed charged with virus, the cutaneous apertures being protected by small canulæ.—*Revue Méd.*, p. 565.

3. *Treatment of Prolapsus Ani of Children by Subcutaneous Injection of Sulphate of Strychnia.*

A child, four years old, came under the care of M. Foucher, who had suffered for several months from prolapsus of the mucous membrane of the rectum. When not returned immediately great pain and difficulty attended its reduction, owing to its being closely grasped by the sphincter. M. Foucher determined to apply Wood's plan of subcutaneous injection to this affection, in order to act directly upon the fibres of the sphincter. He therefore, with one of Pravaz' syringes, injected in the direction of its fibres, and just external to the anus, ten drops of a solution of sulphate of strychnia, in the strength of twenty centigrammes to twenty grammes of water. Twenty-four hours afterwards fourteen drops were again injected. The cure was immediate, and six months afterwards had remained durable. Without attaching undue importance to the cure of a case of disease which is sometimes very easily relieved, it is deemed desirable to direct attention to a mode of treatment so simple, and accompanied by so little pain.—*Gazette des Hôp.*, No. 83.

4. Treatment of Old Fissures of the Anus.

M. Gosselin observes that most of these fissures may be easily cured, whatever be the means adopted. Still he regards forced dilatation as the most expeditious and the most convenient for the patient, while incision best guards against relapse. In many cases he has combined with advantage these two modes: First dilating, and then incising the fissure, which is then easily visible throughout its whole extent. He has observed the fissure and its pains persisting after forced dilatation oftener in women than in men. But besides these fissures thus easily cured, there are others which resist various modes of treatment successively employed, or, when cured, are succeeded by new ones just as painful as the others. After, in such cases, trying the various means one after another, M. Gosselin resorts to daily dilatation, which he has found attended with good results. The index-finger is passed into the anus daily until the pains after defecation have disappeared or notably diminished.—*Gaz. des Hôp.*, No. 91.

5. Cases of Digital Compression in Aneurism.

M. Mirault, of Angers, related two cases to the Paris Society of Surgery. A man aged 23, was bled, and some time after an aneurismal tumor was observed, which, when he was admitted into the Hospital, was about the size of half an egg. Digital compression was made on the brachial artery, at about the middle of its course, from 11 o'clock a. m. to 9 p. m., and next day it was resumed from 6 a. m. to 9 p. m. The tumor became more firm, and the compression was employed again at 6 a. m. of the third day; at 8 the pulsations had become indistinct, and at 12 they had completely disappeared. Thirty-one hours altogether had been occupied in making compression. 2. A child aged 9, having had the trunk of the temporal artery opened, just anterior to the ear, an aneurism about the size of a nut appeared eight or ten days after the accident. Direct digital compression was employed for five hours on the first day; for ten and a-half hours on the second; for eleven hours on the third; for nine and a-half hours on the fourth; for eleven hours on the fifth; for ten hours on the sixth; for ten and a-half hours on the seventh; and for nine and a-half hours on the eighth—making a total of eighty-five hours, at the end of which time the aneurism had become cured.—*Union Med.* 1861, No. 1.

6. *Galvano Cautery in Cataract.* (Academy of Sciences.)

M. Tavignot read a short paper on the application of cauterization by galvanism to the treatment of cataract. The apparatus used by this oculist is Grenet's pedal battery with two appropriate conductors. These consist in two exactly similar ivory rods, terminated at one extremity by a prolongation of the central wire to which is attached the conductor of the battery, and at the other end by a screw to which is adapted a cataract needle about 8 lines in length.

1. The operator holding a conductor in each hand perforates the cornea in two different, but not opposite spots; one puncture corresponds to the transversal, the other to the vertical diameter of the eye. The external puncture is performed first, the inferior perforation immediately after.

2. Pressure of the pedal of the battery with the foot at once causes each of the needles, when in contact with the other, to glow; by alternately parting and bringing together the points, the anterior capsule may be destroyed with the utmost ease, and the lens itself reduced to a pulp which absorption will soon cause to disappear.

3. The foot being removed from the pedal, electric communication is instantaneously broken off, and the needles, having cooled, are rapidly extracted from the anterior chamber.

The operation is very rapid, moderately painful, and possesses, on account of the perfect immobility of the eye-ball, a remarkable degree of precision. The transparency of the cornea moreover allows the operator to follow distinctly each movement of the instruments, and to measure and regulate their action.

7. *On Iridectomy in Glaucoma.* By DR. QUAGLINO.

The following are Dr. Quaglino's conclusions with respect to this operation, the results of abundant clinical observation:—

1. Iridectomy may restore or improve vision even in cases in which the glaucoma is chronic, and more or less complete amaurosis has existed for a longer or shorter time, and signs of congestion of the external membranes are absent. 2. It is indicated in chronic glaucoma, when ophthalmoscopic inspection shows that the papilla and its vessels are not in an advanced state of atrophy. The failures of the operation in old glaucoma have depended upon this advanced condition of

atrophy of the anterior extremity of the optic nerve and its central vessels. 3. In the majority of cases the neuralgia which accompanies the glaucomatous affection disappears after iridectomy. 4. The phenomena of excavation of the papilla, its greenish coloration, and pulsatile action of the vessels, indicated by authors as characteristic of glaucoma, may be wanting, while those derived from the exiguity of the arteries and veins of the retina, especially in the papillary area, and the shortness of their course, are more constant. 5. This change in the papillary vessels, which in old glaucoma terminates in atrophy, must be regarded as the effect of the pressure of the humors which have become increased in quantity, or as the consequence of the strangulation produced around the optic nerve by the engorged or hypertrophied choroid. 6. Iridectomy, therefore, cures glaucoma by evacuating the humors, taking off compression by diminishing the mass of tissues within the eyeball, and disgorging the choroidal vessels. A proof that this is the case is found in the fact that after the operation the nutrition of the vessels becomes augmented, and the hardness characteristic of the glaucomatous eye ceases. 7. The success of iridectomy, independently of other circumstances, is directly proportionate to the amount of inflammatory action which succeeds to the operation, and to the size of the portion of the iris removed. 8. After the operation, the anterior chamber being for the most part abolished, and the convexity of the ball diminished, sensible advantage is usually derived from the employment of presbyopic glasses of an intermediate number.—*Omodei's Annali*, Vol. clxxiii. p. 620.

8. *On Ringworm.* By JONATHAN HUTCHISON. London.

1. True Ringworm, or *Tinea tonsurans*, may be defined as a disease affecting either the scalp or the general surface, in which circular patches are formed, on which the hairs break off short, and a slight, branny desquamation is seen, both hairs and epidermic scales exhibiting under the microscope the sporules and thalli of a fungus.

2. Ringworm in the scalp is rarely seen, excepting in children; but on the general surface is not very unfrequent in young adults.

3. It is contagious, and spreads by contagion only.

4. It is not attended by any peculiar form of dyscrasia, but on the contrary, often attacks children in perfect health.

5. It is much more easily curable on the general surface than on the scalp, owing to the circumstances, that in the latter situation the fungus has obtained access to the follicles of the hairs.

6. Being a purely local disease, ringworm does not require, *per se*, any constitutional treatment.

7. A purely local treatment, if efficiently pursued, is always, rapidly, successful.

8. Epilation, and the use of one or other of the known parasiticides, are the measures of treatment required.

9. There is no real difference between ringworm on the scalp and ringworm on the general surface.

10. Ringworm, although not unfrequently causing minute vesicles, has no true analogy with herpes.—*Medical and Sur. Gazette.*

9. *New Form of Cataplasma in Phlegmon of the Fingers and Toes.*

M. Dechange, a Belgian Military Surgeon, employs the following ingenious procedure:—The emollient or deterotive substance which is to be applied is placed in a large bladder, previously softened by a little oil. Into this the hand or foot is then introduced, the orifice of the bladder being fixed around the wrist or above the ankle by a turn of a bandage, interposing at these points also a little wadding or lint. Evaporation being thus impeded, the cataplasma retains its fluidity for several days, and it may be warmed at will by immersing the bladder in tepid water. The fingers and toes are relieved from all pressure from their own contact, and move freely in the poultice, the beneficial effects of which is thus directed over their entire surface. The economy of the procedure, by saving of rags, is also a recommendation in Hospital practice.
—*Presse Belge*, 1861, No. 5.

10. *Ox-Gall in Frost-Bite.*

Assistant Surgeon Moore, of the United States Army in Utah, states that he has employed fresh ox-gall in frost-bite with great benefit, when the injury is superficial. It is applied as a liniment or on pieces of lint saturated with it.—*American Medical Times*, No. 25.

EDITORIAL AND MISCELLANEOUS.

THE FOOD OF THE ANCIENTS.*

BY DR. C. SAUCEROTTE.

In examining a curious old book, published in 1627, under the title of *Diaeteticum sive de re cibariâ, libri iv*, written by L. Nonnius, the author was struck with the amount of information contained as to the food of the ancients,—a resumé of which he presents in this paper.

FOOD FROM THE VEGETABLE KINGDOM.—I. *The Cerealia*.—Although the cerealia have been in all ages the basis of agriculture, so that antiquity attributed to them a divine origin, and the Greeks even assigned the honor of the invention of bread to the god Pan, yet this article of food, now of such general use among civilized nations, was not well known to either the first Greeks or the first Romans, or, at least, the preparations to which they gave that name differed sensibly from those called by the same name afterwards. Wheat flour kneaded with water, as the Arabs and the mountaineers of Scotland employ it now, was the first species of bread. “It is manifest that the Romans lived for a long time on pulse, but *not on bread*, * * and Ennius, the ancient poet, portraying the famine in a siege, says, that the fathers snatched the *offa* from their weeping children.”—(Pliny, lib. 18.) This *offa*—a species of cake with the Greeks—was not made of wheat, but of barley, and it was called *μάζα*. Their *pulse* was also prepared from roasted barley, and called *ἀλφιτον*, *polenta* in Italy. Milk, honey or wine were mixed in these preparations.

However this may be, we cannot say when or where the

*We make no apology to our readers for the insertion of this interesting translation. The subject cannot but have some charm for the learned physician, and we shall, perhaps, from time to time give other extracts from Dr. Saucerotte's memoir.

use of *light bread* was introduced,—a circumstance which testifies to its universality and its antiquity. Thus although in the Holy Scriptures we see that Sarah prepared the cakes, which Abraham gave to the three angels who visited him in the plains of Mamre, on the hearth by covering them with warm ashes, yet certain passages in Exodus prove that the Hebrews were acquainted with the use of leaven. Moses even prohibited it at certain times (Feast of Passover, &c.), and relates that the Israelites, in their haste to leave Egypt, had not leavened their bread. The Celts were also acquainted with light bread. It seems to me most probable that the ancients, although not ignorant of the existence of leaven, preferred, especially the lower classes, on account of greater economy and quicker preparation, either porridges or dough cakes prepared on a kind of griddle or stove placed on coals, or in holes in the ground answering for furnaces, as the Arabs and poorer classes in Constantinople are accustomed to do at present. Thus, although bread has a more general use now than ever before, the peasants of Sologne have still their buckwheat pap, the Bretons, their *far* (made of oatmeal), the Marseilles their *pilau* (made of rice half baked), and sorgho and Indian corn afford food for many Southern nations.

In the time of Pliny, fermented bread was commonly used in Rome. This naturalist even dilates upon the different kinds of leaven which can be used. Latin authors mention four kinds of bread—*silagineus*, *similagineus*, *confusaneus* and *furfuraceus*. The first two were prepared with wheat flour. The *silagineus*, according to Pliny's expression *tritici deliciae*, was only served up, Celsus says, at the tables of the great. It is referred to in the following from Juvenal:

Sed tener et niveus, mollique silagine factus
Servatur domino.—(Sat. v.)

It was prepared of *siligo* (*Triticum hibernicum*), and must have been somewhat like the *pain mollet* of Paris, which Parliament in 1668 debated the prohibition of through formal decree. The *similagineus*, or *σεμιδαλίτης* of the Greeks, is

mentioned by Martial, as suitable for every kind of preparation

Nec poteris similæ dotes numerare, nec usus
Pistori toties cum sit et apta coquo.—(Xenia.)

A species of semolina was also made of it.

The *confusaneus* (*συγκομισὸς* or *ἀντόπυρος*) was made of flour which was not perfectly freed from its bran. This was equivalent to our brown bread. They were acquainted with its property of keeping the bowels open, due to the ligneous material which is refractory to the digestive process. Nonnius says “alvum movet,” and attributes to the absence of bran, in the bread of the rich, the frequency of obstructions which are observed, he says, with them. It is probable, at least, that the complete removal of the bran, by the present method of bolting, is one of the causes of a very common annoyance at the present day, and which Voltaire jocosely recommended should be inquired into before one sought audience of great men. Finally, the *furfuraceus* (*πιτυρίας*) contained more bran than flour, whence the epithets *ρύπαρος*, and *sordidus, acerosus* which Plautus applies. This was the *panis plebeius* of Seneca.

A bread twice baked, analogous to our sea-biscuit, was prepared for soldiers during a campaign and travellers on sea—*bucellatum* (*διπυρος*).

The Romans, besides, made bread or porridges for the people's use, not only of various kinds of the genus *Triticum*, such as spelt (*T. spelta*), from which *alica* was prepared, and varieties which were known as *zea, typha, olyra*; but also with other grains, as barley, the first cereal, as some say, ever employed as food for mankind,—as millet (*Panicum miliaceum*), many species of which were in great favor with the Aquitanian Gauls, the Ethiopians, the Sarmatians, the tribes of Pontus (Ponticæ gentes nullum panico preferunt cibum.—*Pliny*), and in Campania (Milio Campania maximè gaudet, pultemque candidam ex eo facit, fit et panis produlcis.) The same author adds “panis multifera et è milio fit, at è panico rarus,” and by “panico” is probably meant *Panicum italicum*.

As for the millet in use among the people of Asia and Africa it was doubtless another species, *Holcus sorgho*, with which the Arabs yet prepare some of their food.

As for the barley, for which, according to Theophrastus, the soil of Attica was specially favorable, although it furnished when used alone a hard stiff bread, less nutritive than cheese, yet the Athenians so esteemed its pretended reparative virtues that some of the gladiators used it as their ordinary food—*gladiatores hordearii*. It is probable that they mixed a certain amount of cheese with it, which then produced a soft bread of good quality. With the Romans, barley bread was distributed as a mark of ignominy to soldiers who had fled.—Cohortes si quæ cessissent loco, decimatas hordeo pavit,—Suetonius. This occurred after the battle of Canna. Later, this kind of bread was abandoned to animals.

The coarser kinds of bread made of oats and rye, common among Northern nations, was not used by the Greeks or the Romans. Pliny speaks of it quite contemptuously—Secale Taurini sub alpibus Asiam vocant, deterrimum et tantum ad arcendam famem utile * * admiscetur huic far ut mitiget amaritudinem ejus, et tamen sic quoque ingratissimum ventri est. As for oats, indigenous in the north, Italy received it from the Gauls, with whom it was eaten, being roasted, in cakes or in porridges, as among the Scandinavians. I do not speak of maize, unknown to Europe before the discovery of America, although the description given by Pliny of *loba* or Indian millet appears to apply to that plant. But to close what I have to say on the gramineæ, I remark that rice, which is the foundation of the aliment of the Eastern nations, was very little used by the Greeks and Romans, at least in the preparation of bread, although they employed different kinds of vegetables in the preparation of that article, or what was called by that name, for it seems to me when mention is made of more than sixty kinds of bread, that the proper significance of the word must be stretched to include them. Pliny informs us that there were many kinds of bread in Italy, which sometimes took their name from the dishes with

which they were eaten, as oyster-bread, and sometimes from the mode of cooking, the form or articles they contained. Each variety of bread had its own *pistor*, or baker, and in the first rank of these stood the siliginarii. In our own days, what a great contrast between the bread of Paris and the oat-bread of Finland, the *Pumpernickel* of Westphalia, the bread of the Russian serfs, prepared from the siftings of all kinds of grains, and that of the miserable inhabitants of the Alps, who bake twice or thrice a year, and suspend it in the chimney, and whose bread must be soaked when one wishes to eat it.

PAstry.—Flour, milk, oil, honey and sometimes eggs, cheese (*caseum*), fruits or aromatic plants,—these were the articles which entered into the composition of the different forms of pastry, which were known, to the Greeks, under the generic names of *πέμπατα*, *ἴτρια*, *τραγήματα*, *πλάκους*, and to the Latins as *bellaria* (*res bellas*), *placentæ* (from *πλάκους* or from *placere*), *liba* (from *libare*, using them in libations), *obelice* (from *οβελίας*, wafers), *tortæ* (from *torreo*, whence we have *tarts*,) *crustulæ* (diminutive of *crusta*).

Ut pueris olim dant crustula blandi
Doctores, elementa velint ut discere prima.—(Hor. Sat. I. 1.)

Children were not the only lovers of these dainties; the taste was widely distributed among the Romans, who sometimes even ordered, in their wills, annual distributions of cakes to the people.—*L'Union Medicale.*

L. H. S.

FOREIGN CORRESPONDENCE.

We take pleasure in announcing to our readers that we have made arrangements with a competent medical gentleman, a graduate of the University of Maryland, to furnish us with a series of letters from the principal medical centres of Europe. The first of the number, a letter from Berlin, we give below.—**EDITORS.**

[Correspondence of the Maryland and Virginia Medical Journal.]

BERLIN, January 24, 1861.

Messrs. Editors:—In conformity with your request, I shall now communicate to you some of my observations in the medical sphere of Berlin. I have been here during the greater part of two sessions of the University, and having availed myself of the superior clinical facilities which this place affords, in the various branches of the profession, I am led to believe that I shall be able to furnish you with some interesting facts.

I have found that the medical luminaries here are zealously devoted to the cultivation of the science, on the basis which distinguishes medicine of the present day from that of former times. In regarding nothing as reliable which does not emanate from ample observation, scientific research and rational deductions, they have been enabled to free it from many of the false notions which had gained a stronghold by tradition, and to contribute a great deal of valuable material to its reconstruction.

There are three hospitals connected with the University of Berlin—the Charité, (add to which the famous Pathological Institute), the Königliche Klinik der Universität, and the Obstetric Hospital. I need not announce the names of Virchow, Græfe, Frerichs, Traube, Langenbeck, Jüngken, Bærensprung and Martin, in connection with the institutions I have named, to convey to you an idea of their character. The Charité is a large and magnificent edifice, in which the following clinical lectures take place daily:—Two medical clinics, the one by Frerichs, the other by Traube; a surgical clinic by Jüngken; a clinic for venereal diseases and diseases of the skin by Bærensprung; a gynecological clinic by Martin, and a clinic for diseases of children by Ebert. Langenbeck conducts a surgical clinic at the Königliche Klinik der Universität, and Romberg has a clinic on the diseases of the nervous system in the same institution. Martin delivers clinical lectures at the Obstetric Hospital three times a week.

I think I will best meet the object of this correspondence by writing what I think may interest you in relation to the names I have mentioned. I shall begin with Dr. Albrecht von Graefe, Extraordinary Professor in the University. He has for many years diligently applied his genius to the study of ophthalmology, and has thereby contributed much to the progress which this branch of science has made. Among the many great merits which may be claimed for him, the one standing paramount is his satisfactory description of glaucoma, the explanation of its symptoms, and what is more than all, the treatment which he has proposed for it, and successfully practised. He has proven beyond a doubt that the phenomena which this affection produces, depend on a preternatural intra-ocular pressure. He has called attention to the tense condition of the globe of the eye in support of this view, and has demonstrated with the ophthalmoscope the pulsation of the arteries of the retina, which never becomes sensible to sight under any other condition.

As Graefe's highly valuable contributions on this subject have, as I believe, not yet appeared in English literature, you will, perhaps, indulge a few sketches from my notes in connection therewith. The disease being met with in different stages presents various forms. It may, for the sake of convenience, be divided into an acute and chronic form.

ACUTE GLAUCOMA.

The patient is suddenly attacked by a violent supra-orbital neuralgia, and almost invariably notices a blue ring around the flame of the lamp when employing the eye in artificial light. Graefe thinks that this symptom may be considered pathognomonic of the affection. Sometimes all the colors of the rainbow are represented in this ring, yet in these cases the blue almost always seems to predominate. Occasionally there are cases met with where the patient sees two rings, the one within the other. When the eye is examined in this stage, it will be found bathed in tears, with the conjunctiva in a state of active congestion, the aqueous humour rendered cloudy, the pupil dilated and the iris pressed forward, there-

by encroaching upon the dimensions of the anterior chamber. There is no other inflammatory condition of the eye which produces a dilatation of the pupil, with the exception of one form of iritis, termed here, iritis serosa; but here the dilatation is of a less degree, while the iris is not pressed forward. The gravest symptom presented by glaucoma is the effect which it produces on the function of vision. Oftentimes the patient is rendered totally blind within an hour after the attack, while at others, this result takes place gradually. This fact is important in the differential diagnosis between glaucoma and iritis serosa; in the latter, vision does either not suffer at all, or which is oftener the case, only to a degree which can be explained by the cloudiness of the aqueous humour with which it is attended.

CHRONIC GLAUCOMA.

Acute glaucoma is of short duration, and gradually assumes the chronic form, if not prevented doing so by remedial measures, by the inflammatory symptoms receding. The supra-orbital pain disappears and the conjunctiva is relieved from its former condition, while the veins thereof may be seen to become enlarged. The cornea becomes very torpid, so that it may be touched with pointed paper, (a mode in which the sensibility of the cornea is tested here) without reacting. The pupil and iris remain in the same condition as in the acute form; while the power of vision is either greatly reduced or entirely abolished; to this is added the characteristic sea-green color which is reflected from the pupil. The continuance of this process compromises to a considerable degree the nutrition of the eye, and often produces a glaucomatous cataract. This must not be confounded with the sea-green color with which glaucoma is attended. Graefe thinks that this sea-green color is due to the combined effects of a dilated pupil, a cloudy aqueous humour, and the slight coloration which is met with in the lens of those of maturer age.

NATURE OF THE DISEASE.

Græfe has proven that glaucoma is due to an inflammation in the deep tissues of the eye, in which the choroidea probably participates to the greatest extent. The process is attended with a hypersecretion or an exudation of fluid, so increasing the intra-ocular pressure, as to exert a paralyzing effect on the retina. The effect of pressure on the retina can be demonstrated by pressing the finger on the globe for a while, by which experiment we can subject ourselves to a temporary blindness. The tense condition of the globe of the eye in glaucoma, testifies in favor of Græfe's opinion; it can be constituted by placing a finger on each globe, and comparing the different degree of resistance which they offer. Another circumstance which points to an increased intra-ocular pressure is, the enlarged condition of the conjunctival veins; the blood meeting an obstacle in its return by pressure from within, seeks a passage through the veins of the conjunctiva. When the refractory mediums are not too much clouded, the arteries issuing from the papilla optici, will be seen to pulsate on subjecting the eye to an ophthalmoscopic examination. That this phenomenon is caused by increased pressure, is proven by the fact, that it occurs in no other condition, and that it may be produced by causing pressure on the globe while examining with the ophthalmoscope.

TREATMENT.

Having satisfactorily explained the nature of the disease, Græfe resorted first to the various antiphlogistic remedies, and then to paracentesis of the cornea, but found these inadequate to control it. Having noticed that excision of a piece of the iris, in pursuing other indications, greatly reduced intraocular pressure, he tested its efficacy in glaucoma and found it fraught with the happiest results. The oculists of Vienna, Paris and London, have all adopted Græfe's mode of treatment. If iridectomy be performed in the acute stage, a perfect restoration of sight may be reckoned on. I have seen patients who have been enabled to read the finest print

a short while after the operation, though they had been blind for years before. It is however, evident from the nature of the disease, that the prognosis depends a good deal on the time it has existed. Though the disease may be very chronic, if the patient can yet discern light, the operation may be performed with a good deal of certainty, that vision will be restored to a considerable degree. It is necessary to add that the disease sometimes deviates from the description I have given.

Græfe has seen a few cases where progress was so rapid, that though he performed the operation within seven or eight days after the attack, it has proved unavailing, so great was the damage inflicted on the retina. It is therefore important, that the operation be performed as soon as the diagnosis is made. Surgeons must not permit themselves to be intimidated by the violence of the inflammatory symptoms. I have seen patients, the vessels of whose conjunctiva were injected to a maximum degree, and who have been unable to sleep for nights in succession from the intense supra-orbital pain, relieved to considerable degree of these symptoms, and sink into a quiet slumber a short while after the operation. The more violent the symptoms are, the greater is the indication. Græfe justly places this operation in the same category with tracheotomy, which every physician should be prepared to perform at a moment's warning. In some rare cases, the blue ring spoken of, the supra-orbital pain, the dilated pupil and slight disturbance of vision, act as prodromic symptoms; after remaining for a short time they disappear and re-appear after a longer or shorter interval with all the pernicious effects of the disease. In some of these cases where the symptoms reach but a minimum degree, it is not absolutely necessary to resort to the operation immediately, especially when the patient is watched by the physician; but as the operation is a perfectly safe one when skillfully performed, it is better to resort to it when there is reason to believe that the patient may apply a second time for medical aid, and when it may be too late. Science has just reason to con-

gratulate itself in now having a means within its grasp, to battle successfully against a disease which formerly it was forced to recognize as a perpetual sentence to blindness. It is all-important that the operation be performed in the correct manner. The operation consists in an excision of a piece of the iris in the shape of a V, the base of which corresponding to its pupillary margin, the apex to its periphery. The operator fixes the eye with a pair of forceps, holding a fold of conjunctiva, he then makes an incision through the cornea at its periphery or through the sclerotica, a little behind it ; he then inserts through this incision a curved pair of forceps, grasps a piece of the iris and pulls it out ; an assistant clips it off. The operator must avoid injuring the lens, with either the knife or forceps, otherwise he will inflict a traumatic cataract on the patient. With this view, the operator when he feels that the point of his instrument (which is a lancet-shaped knife) has pierced the tunics, must give the handle a direction which will make the point proceed farther in a direction forwards, otherwise he will puncture the iris and thereby injure the lens. The curved forceps must be introduced with the blades closed, and the convexity towards the patient, when they have entered and reached a point near the pupil, the blades must be spread, a fold of the iris will insinuate itself between them, which must be grasped and gently withdrawn. If the forceps go beyond the pupil there is great danger of wounding the lens. The artificial pupil thus made must reach as near to the periphery of the iris as possible ; this is especially important in chronic cases. Græfe therefore, enters the anterior chamber through an incision in the sclerotica, this can be done with facility, as the iris is not inserted at the juncture of the cornea with the sclerotica as most anatomical works have it, but a little behind it. Though the efficacy of iridectomy in reducing intra-ocular pressure is a well established fact, the manner in which it produces this effect is difficult of explanation. Græfe has instituted various anatomical investigations with a view of solving this problem, and though he has offered various explanations, he has not

yet satisfied himself. The explanation which bears the greatest degree of plausibility is, that the pressure which displaces the iris is concentrated behind it, and that the operation promotes its uniform diffusion within the globe.

Græfe has under his charge a fine hospital, the "Augen Klinik," devoted to the diseases of the eye exclusively. Here he delivers clinical lectures three times a week, each lasting two hours; in addition to this, he also delivers theoretical lectures on the diseases of the eye. He also conducts a practical course of operative ocular surgery, in which supplying his pupils with phantoms, eyes, rabbits, and subjects, he offers them every facility to qualify themselves in this branch. His assistants, Drs. Leibreich and Schweigger respectively, teach the application of the ophthalmoscope, and the normal and pathological anatomy of the eye.

Græfe is in the prime of life, and devotes himself entirely to the interests of the science. He is engaged with Prof. Donders, of Utrecht, and Prof. Arlt, of Vienna, in editing the "Archiv für Ophthalmologie." The work has reached its sixth volume, and a volume is added to it annually.

Yours respectfully,

A. F.

COMMENCEMENTS.

UNIVERSITY OF MARYLAND.

The fifty-fourth Annual Commencement of the School of Medicine connected with this University, was held, under authority of the Provost and Board of Regents, on Saturday, March 2d, 1861.

Professor G. W. Miltenberger, Dean of the Faculty, read the mandamus.

Professor N. R. Smith, conferred the degree of Doctor of Medicine upon sixty three graduates, and presented to them their diplomas.

Professor Wm. A. Hammond delivered the valedictory address to the Graduates.

MEDICAL COLLEGE OF VIRGINIA.

The Annual Commencement of this College was held on Tuesday, the 5th of March.

Professor Charles Bell Gibson conferred the degree of Doctor of Medicine upon fifty-nine graduates.

Professor James B. McCaw addressed the Students, and announced the successful competitors for the prize of \$50 for a Medical Essay, and the same for a Surgical Essay.

The first was bestowed on Dr. Isaiah H. White, for his essay on Malarious Diseases. The second was bestowed on Dr. Mason D. Elsey, for his essay on Tetanus.

Dr. C. G. Coleman, Dr. Henry C. Reamy, Dr. Robert E. Moore, Dr. Cyrus Dogget, Dr. H. E. Jennings, and Dr. H. W. Davis, received honorable mention as competitors.

Professor James H. Conway delivered the valedictory address to the Graduates.

BALTIMORE COLLEGE OF DENTAL SURGERY.

The twenty-first Annual Commencement of this Institution, was held on the evening of February 26. There were twenty-nine graduates.

Professor Piggot delivered the address. His peroration being a touching eulogium of the late Prof. C. A. Harris, M. D., whose zeal, integrity, untiring perseverance, benevolence, learning and piety—whose exalted character, in fact—commanded the admiration, and invited the imitation of all men. By the death of Dr. Harris, the oldest Dental College in the world lost its founder, and its students his living example.

MARYLAND COLLEGE OF PHARMACY.

The Fifth Annual Commencement was held on the evening of March 1. Professor F. Donaldson announced the names

of five of the students as entitled to the diplomas of the College, which were then conferred by George W. Andrews, Esq., President of the Board of Trustees.

The valedictory address to the Graduates was delivered by Professor Lewis H. Steiner.



BERKSHIRE MEDICAL JOURNAL.

A medical periodical with this title was commenced with the year and has now reached its third number, being published monthly at Pittsfield, Massachusetts. The editors are Profs. W. H. Thayer and R. C. Siles. We were favorably impressed with the first number, and now that we have made its better acquaintance we have no hesitation in expressing our opinion that it is every way creditable to the gentlemen who have it in charge, and calculated to be of very decided service to rational medicine.

The original articles are extremely good and we may, perhaps, have occasion to refer to them more particularly hereafter. The selections are made with discrimination, and upon the whole we regard it as decidedly the best medical journal published in New England.



THE BEATING OF THE FœTAL HEART.

I ponder'd by the bed side,
I walked about the room:
The stillness of my patient
Fill'd my mind with deepest gloom;
The Os was firm and rigid,
Not a fibre of it stirr'd;
And the beating of my own heart
Was the only sound I heard.

I sat me by her right side,
I watch'd her pale, pale cheek;
But as it grew still paler,
I did not dare to speak.
I watch'd her for a movement,
Then ask'd her for one word;
But the beating of my own heart
Was all the sound I heard.

It came not—no—it came not,
The night was passing on,
I knew not but my patient
And her Fœtus, might be gone.
To the precept of my teacher
A happy thought referr'd,—
Where he told me, most profoundly,
What sounds were often heard.

The Stethoscope,—then gently
I pressed it to her side,
As though she'd been an angel,
Or were to be my bride.
I pressed it nearer—nearer;
I did not speak a word,
But the beating of the Fœtal Heart
Was the joyous sound I heard.

ACCOUNT OF THE POISONING OF THENARD BY CORROSIVE SUBLIMATE.—M. Flourens read an interesting Eloge on Thenard, before the Academy of Sciences, January 30, 1860. We find it in the following account of the sangfroid of Thenard, when he had accidentally taken a large quantity of corrosive sublimate, and of the excitement incident to the occasion :

“During a lecture at the Polytechnic School, it happened one day, that something necessary for the demonstration was wanting. Thenard called for it impatiently, and while the assistant ran with all his might to procure it, the professor, by way of passing the time, put his hand on a tumbler and raised it to his lips without examination. Having taken two swallows, he placed it on the table. Gentlemen, he said with sangfroid, I have poisoned myself. An electric shock was immediately felt, and the faces of all became pale. Thenard stated that it was corrosive sublimate which he had swallowed, adding white of egg will combat its effects : ‘will some one get me some eggs?’ Scarcely had this sentence escaped him, when the doors and windows were not wide enough—they ran, they pitched headlong—the storehouses are forced open, the kitchens likewise—but no eggs ; the neighborhood being put under contribution, was soon pillaged, each brought his share, and a mountain of eggs was reared. In the meantime a student flew to the Faculty of Medicine. Interrupting an examination, he cried : ‘A doctor ! Thenard has poisoned himself in the school while delivering his lecture.’ Dupuytren arose. ‘Do you understand?’ he said, and ran out ; a cabriolet is in the way—he mounts—whips the horses—arrives—leaps to the ground. However, thanks to the albumen, Thenard was already saved; but Dupuytren required the employment of the pump, so as to be sure that the stomach might not absorb any corrosive substance. The organ becomes inflamed ; and, and safe from the poison, Thenard is put in danger by the remedy.”

Thenard was carried home. There, all the doors were guarded ; the students of all the schools united to surround the house with triple ramparts ; advanced sentinels were detached to keep off the troublesome ; silent and mournful all awaited the news transmitted from within, where the most fitted were scarcely able to restrain their zeal; in the sincerity of their affection, they envied the privileges of the family. When Thenard reappeared in his chair at the Sorbonne, the excitement was so great that every one ran out without knowing precisely what he was doing; the professor himself declared that he had no power of controlling his deep emotion.

MARYLAND AND VIRGINIA MEDICAL JOURNAL.

VOL. XVI.

MAY, 1861.

No. 5.

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T H E

MARYLAND AND VIRGINIA MEDICAL JOURNAL.

Vol. 16---No. 5.

MAY, 1861.

New Series.

ORIGINAL COMMUNICATIONS.

I.—A CLINICAL LECTURE ON AUSCULTATION OF THE HEART;

Delivered in the Infirmary of the Medical College of Virginia, Dec. 1860,

BY DAVID H. TUCKER, M.D.,

Professor of the Principles and Practice of Medicine.

[*Reported by THOMAS L. HUNTER, M.D.*]

You will remember, gentlemen, that in a late clinical lecture on the subject of dropsy, I alluded to cardiac disease as one of its most fruitful causes ; and I propose now to explain to you the physical means of diagnostinating the diseases of the heart. In order to do this it is necessary briefly to remind you of the anatomical construction and physiological action of the heart.

The blood which reaches the right auricle by the venæ cavæ passes through the auriculo-ventricular opening into the corresponding ventricle. On the contraction of this chamber it is sent through the pulmonary arteries to the lungs, where it is oxygenized. From the lungs it passes

through the pulmonary veins to the left auricle and thence into the left ventricle through the left auriculo-ventricular opening. From this cavity it passes into the aorta and is distributed to the system.

During this physiological action, the heart contracts and dilates. Its contraction is called its *systole*, its dilatation its *diastole*. But it will be necessary to go farther and examine in what order the ventricles, auricles and cardiac valves perform their peculiar function.

For all practical purposes it is sufficiently accurate to state that the two ventricles contract and dilate together. The same may be said in reference to the auricles, but while the ventricles contract the auricles dilate and vice versa. In reference to the valves, it may be stated that when the auricles contract the auriculo-ventricular valves open so as to allow the onward current of blood to pass into the ventricles, which, in their turn contract, closing the auriculo-ventricular valves so as prevent the regurgitation of blood into the auricles. The blood not being able to pass back into the auricles, the pulmonary and aortic valves open so as to allow the onward passage of the blood. So soon as this has been accomplished the arterial valves close so as to prevent regurgitation backwards into the ventricles. This combined action of these various parts, constitutes a beat of the heart, and the order of occurrence, its *natural rhythm*.

Having explained these points, which it is necessary for you to thoroughly comprehend, let us pass to the natural sounds that occur during this cardiac action. If the ear be placed over the region of the healthy heart, two distinct sounds will be heard, separated of course by spaces of time, which language can scarcely define, but which the accurate ear may easily recognize. The first sound is longer and duller than the second, and corresponds or is synchronous with the contraction of the ventricles, with the closure of the auriculo-ventricular valves, with the passage of the column of blood through the open arterial valves, with the pulsation at the wrist, and with the impulse of the heart against the

chest. This sound of the heart may be considered due to the various causes just mentioned, since nothing definite has been fixed upon by authors in reference to its single or sole cause. This sound being accomplished, an infinitely small space of time elapses when the second sound is produced ; this sound is sharp and quick, and from experiments is supposed to be due to the closing down of the arterial valves, by which the blood is prevented from regurgitating into the ventricles.

It may be considered synchronous with the beginning of the ventricular dilatation. This sound being accomplished, a pause, long in comparison with the one already mentioned, takes place, during which the ventricles become filled by the cardiac actions already alluded to. It is absolutely necessary for you to familiarize yourselves with these natural sounds of the heart and the time of the heart's action at which they occur, before you can appreciate those morbid sounds which indicate disease of the valves of the heart. As long as the heart is healthy, nothing will be heard but the healthy sound, separated by the pauses to which we have alluded ; so soon, however, as the lining membrane of the heart becomes roughened or the valves lose their pliability, morbid sounds will replace one or the other, or both, of the natural sounds of the heart. If they occur during the contraction of the heart they will replace the first sound of the heart ; on the other hand, if they occur during the dilatation of the heart, the second sound will be replaced. Or if the morbid sound is heard, both during contraction and dilatation of the heart, both the first and second natural sound will be replaced.

As the result of inflammation or rheumatism, or of ossification, &c., the valves become roughened and unable to open and close perfectly, thus interfering with their functions and giving rise to the morbid sounds which we will now proceed to consider.

The morbid sounds are designated either as a *bellows murmur* (*bruit de soufflet*), or as a *sawing sound* (*bruit de scie*), or as a *rasping sound* (*bruit de râpe*) ; these names merely

indicate different degrees of intensity or roughness, and may be regarded as essentially the same sounds. For purposes of classification the valves may be regarded as either *constricted* or *dilated*. By *constriction* of a valve we mean that the valve opens so imperfectly as to interfere with the onward current of the circulation, thus producing a morbid sound. By *dilatation* of the valve we mean its imperfect closure, so that either during the contraction or dilatation of the heart, the blood is allowed to regurgitate through some one or other of the valves.

The following table will upon accurate reflection enable you to understand not only the cause of the morbid sound, but by referring to the time of the heart's action, it will enable you (in connection with other points of diagnosis) to determine also the valve which is diseased, and the character of that alteration, viz :—whether the valve be *constricted* or *dilated*:

Auriculo-ventricular Valves.

Constricted.—First sound, healthy; second sound, morbid.

Dilated.—First sound, morbid; second sound, healthy.

Arterial Valves.

Constricted.—First sound, morbid; second sound, healthy.

Dilated.—First sound, healthy; second sound, morbid.

To illustrate:—1st. Suppose either the right or left auriculo-ventricular opening *constricted*, the morbid sound would occur at the second sound of the heart, because it is at that period that the blood is passing from the auricle through a constricted and roughened opening into the dilating ventricle, at which moment you will remember that the arterial valve closes to prevent regurgitation, which closure causes the second sound of the heart. 2d. Suppose the auriculo-ventricular valve to be *dilated* or *insufficient*, then the bellows murmur would replace the first sound of the heart, because during the contraction of the ventricle a portion of the blood would regurgitate through the dilated auriculo-ventricular valve into the auricle. 3d. Suppose the arterial valve to be *constricted*, a bellows murmur would be heard at the first sound of the heart,

because at that time the ventricle by its contraction forces the blood through the constricted arterial valves. 4th. Suppose the arterial valve *dilated* or *insufficient*, a bellows murmur would occur at the second sound of the heart, because the valve not closing, the column of blood driven into the artery would fall back into the dilating ventricle. But a valve may be both *insufficient* and *constricted* at the same time, in which case there will be a bellows murmur at both sounds of the heart. Or an arterial valve might be *dilated* or *insufficient* at the same time in conjunction with auriculo-ventricular *insufficiency*, and in that case you would have a bellows murmur produced during the first sound of the heart by insufficiency of the auriculo-ventricular opening, and during the second sound by the insufficient arterial valve.

Not to detain you further upon this point, I may say that a reference to the table I have given you will explain every combination of valvular disease that may exist; and by marking closely the time of the heart's action at which the bellows murmur occurs, you will be able to ascertain whether the murmur depends upon insufficiency or constriction of one or more of the valves of the heart.

But the ingenuity of the skilful auscultator goes farther in determining the diagnosis; for example, suppose you have a bellows murmur at the first sound of the heart,—this may be due to either constriction of one of the arterial valves or to dilatation of one of the auriculo-ventricular valves; to determine which it is the following plan may be adopted:—By an examination of the anatomy of the heart and its position in the chest, you will find that the line of direction of the arterial valves is somewhat above the line of direction of the auriculo-ventricular valves; the former are at the base of the heart, the latter are towards its apex. Now it is perfectly clear that the nearer the ear is placed to the point at which a sound is produced the more distinctly that sound will be heard; therefore, in the case supposed, if the bellows murmur were heard with most distinctness as the ear passed from the base of the heart towards its apex, and reached its acme

at the point on the chest corresponding with the line of the auriculo-ventricular valve, then the bellows murmur would be referable to auriculo-ventricular dilatation. On the contrary, if the intensity of the bellows murmur was greatest at the base of the heart and propagated along the great blood vessels, then the sound would clearly be due to disease of the arterial valve. Any other combination of valvular disease by a similar mode of investigation may be satisfactorily diagnosticated. But cardiac auscultation goes farther. By the foregoing modes of investigation it has been determined, first, whether there be valvular disease; secondly, whether that disease was constriction or dilatation; and thirdly, whether it be an arterial valve or an auriculo-ventricular valve. But it must be remembered that the heart is a double organ, and that there are two auriculo-ventricular valves and two arterial valves, and the question arises whether the diseased valve be on the left side of the heart or on the right side of the heart. To the ingenuity, I believe, of Lænnec, we owe the following approximative mode of determination. Let me illustrate:—Suppose it has been determined that one or the other of the arterial valves is the seat of disease; if it be the aortic valve (which is on the left side of the heart) its intensity will be best heard over the point of that valve, and as the ear of the auscultator passes from the left side of the thorax to the right, the morbid sound will gradually diminish in intensity until a point is reached on the right side of the thorax at which it will cease to hear the morbid sound produced at the aortic valve, but will hear the healthy sound produced at the pulmonary valve, leading from the right auricle. Suppose, on the contrary, the pulmonary valve was diseased, then finding its greatest intensity over its natural position, the ear of the auscultator passing from this point towards the left side of the thorax, finds the intensity of the murmur gradually diminishing until a point is reached at which this murmur ceases to be heard, and the natural sound at the aortic valve is distinguished. Other combinations may be made and explained on the same principle, and if, per-

chance, both arterial valves or both auriculo-ventricular valves were similarly diseased, then the ear might be passed either to the right or to the left without losing the morbid sound or attaining the point of healthy sound; because both valves are similarly diseased. But suppose the aortic valve was constricted, giving a bellows murmur at the first sound of the heart—its healthy second sound being produced—and that at the same time the pulmonary valve was dilated, giving rise at that point to a bellows murmur at the second sound of the heart, its first sound remaining natural. In that case you would hear two bellows murmurs, one over the aortic valve, corresponding to the first sound of the heart; the other, over the pulmonary valve, corresponding to the second sound of the heart. In passing your ear from the point of greatest intensity, produced by disease of the aortic valve, towards the right side of the chest, you would hear that morbid sound gradually diminishing till you heard the healthy first sound produced at the pulmonary valve, followed by the diseased second sound due to insufficiency of that valve; and, vice versa, hearing at its point of greatest intensity, the bellows murmur at the second sound of the heart, due to dilatation of the pulmonary valve. As you pass your ear to the left side of the chest you would cease to hear the bellows murmur at the second sound, but would hear the natural second sound at the aortic valve preceded by a morbid murmur due to constriction of the aortic valve.

Such is the theory of cardiac auscultation, and while it may not of itself be capable of positive determination in practice, yet taken in connection with the many rational symptoms of valvular disease, it forms one of the most ingenious and beautiful systems of diagnosis of which medical science may boast.

The industrious auscultator who comes constantly in contact with cardiac diseases, may almost attain practical perfection in this means of diagnosis, and it becomes every medical student by deep reflection upon, and acute examination of, the theory of cardiac auscultation to comprehend

its great and important principles, so that hereafter when brought in actual relation with cardiac diseases he may be able to reach that degree of practical knowledge, which will serve to distinguish him in his profession and render him a benefactor to the human family.

ART. II.—ON THE THERAPEUTIC ACTION OF BISMUTH.

An Extract from a Lecture Delivered at the Medical College of Virginia,

BY J. B. M'CAW, M.D.,

Professor of Chemistry and Pharmacy.

Having concluded my remarks on bismuth and its combinations, I call your attention for a few moments to their value in the treatment of disease. I think you will see how much the curative virtues of these compounds depend upon the physical and chemical properties, already explained to you.

First, then, remember the physical properties of the bismuth compounds and especially of the basic subnitrate, the usual form in which this agent is administered by the physician. This salt, as I have told you, is the result of the action of water on the ternitrate, causing a white, almost insoluble semi-unctuous precipitate, which is the subnitrate of the pharmacopœia.

Known as the magistery of bismuth, this powder was much prized by the ladies, long ago, as a cosmetic, because of its emollient influence on the skin, concealing pimples, freckles and other deformities to which even the fair sex is sometimes liable, and leaving a beautiful white gloss much to be admired. Not only did its external application act soothingly to the excoriated or irritated integument, but it was also used as a drying powder, checking a too profuse perspiration, by coating over, with its delicate varnish, the exuding membrane.

Suppose then, you have a patient with dyspepsia, an irritable mucous membrane, painfully excited during the act of digestion, by the excessive flow of the gastric juice and the

mechanical efforts of the muscular coat, can you not, with great propriety, appeal to the innocuous and emollient subnitrate of bismuth, which coats over the angry membrane with its soft white precipitate, shields it from all causes of irritation, and gives to the digestive function a great amount of comfort?

Recollecting, also, its mechanical effect upon the transpiration of the skin, you can see why the subnitrate should be made use of in the treatment of serous diarrhoeas, especially those not the result of organic disease; in the "summer disease" of teething children, and in the irritable form of disordered bowels following measles and scarlet fever. Here, as we have to act upon a great extent of surface, it is necessary to give the remedy in large repeated doses, and in such cases I have prescribed one ounce in twenty-four hours with great advantage.

So much for the mechanical influences of this agent on the mucous membrane, explaining, to some extent, its therapeutic action; but I think by observing its chemical attributes you may also derive some hints of practical importance.

I have shown you that the presence of bismuth or any of its compounds can be detected by the agency of sulphuretted hydrogen, when a precipitate of the brown-black sulphide of bismuth will at once appear. So sensitive is the subnitrate to the presence of this agent that its use as a cosmetic has almost been abandoned since the introduction of the coal gas as an illuminating agent, which, when impure, often sets sulphuretted hydrogen free. The pearly cheeks of a cluster of beauties decked for the ball would soon, under the action of this unerring detector, even rival the sooty complexion of Christy's Minstrels.

If you have to treat hereafter cases of gastric or enteric disorder accompanied by disengagements of sulphuretted hydrogen, as, for instance, that distressing condition of stomach called "egg belch," or the windy colic of defective digestion and torpid liver, remember that subnitrate of bismuth may be relied on to neutralize the offending and offensive gas, by

the formation of a sulphide which is entirely innocuous, if not positively curative. The dark color of the stools after the administration of this remedy proves the truth of this statement, as there is always enough sulphuretted hydrogen to give the characteristic precipitate.

The surgeon as well as the physician may gain some useful ideas from a study of the physical and chemical properties of bismuth. As an application to burns, or diseases of the skin, such as erysipelas, the subnitrate, with its soothing influence, will be found very valuable; also in excoriations of the skin, and the chafing of infants, the result of acrid discharges. As a disinfectant, I would advise you to use this harmless salt freely, being equally effective and greatly more convenient than the tar and plaster of Velpeau, or the permanganates of Girdwood—a foetid ulcer, a sinus connected with a carious bone, or a malignant sore, pouring out its putrid odors, will be greatly improved under the free application of the agent under discussion.

Before closing these remarks, which are not intended to infringe upon the prerogatives of our colleagues of surgery and the practice, but rather to shew you the value of chemistry even in the more practical departments of medicine, I will mention that as arsenic is not unfrequently found in combination with bismuth in a native state it would be well before using the subnitrate, in the large quantities I have recommended, to make sure that your preparation is pure. The usual mode of manufacturing the article, I should think, would preclude the possibility of much danger from this source, but we have the high authority of Prof. R. E. Rogers, of Philadelphia, to justify us in giving you this caution. In experiments made by him some years ago he found traces of arsenic in many of the samples of subnitrate of bismuth collected by him from the druggists of Philadelphia. As far as my own observations go, however, I have never detected arsenic in the subnitrate in any appreciable quantity, and never heard, after an experience of many years of its producing the symptoms of arsenical poisoning in a single instance.

ART. III.—TWO CASES OF CALCULUS IN THE FEMALE BLADDER.

BY JOSEPH W. SMITH, M.D.,

PETERSBURG, VA.

As calculus in woman is of comparatively rare occurrence and still more so are such cases in which it becomes necessary for lithotomy to be performed, I deem it well to report the two following cases which may interest the readers of the *Journal*. The first case is one where spontaneous expulsion occurred in consequence of ulceration of the wall between the bladder and vagina, producing vesico-vaginal fistula. The second case is one where an operation was demanded.

CASE 1. Occurred in the person of a negro woman who is about forty-five years of age. Her first symptoms appeared about twelve years ago, and were retention of urine, pain and other indication of some disease of the bladder. The bladder was once or twice relieved of its surcharge by the introduction of the catheter, after which time urination gave but little trouble. She became very much emaciated and her general health very bad. No effort had been made to remove the offending cause as it had not been discovered. Thus her case remained when I was first called to see her, at which time she was suffering with incontinence of urine and pain in the neighborhood of the neck of the bladder. From the vagina there was a discharge of pus and sanies. The urine would pass away in greater quantities sometimes than at others. A short time after this she was at stool when she heard something fall with great force in the vessel, which attracted her attention, and on examination it was discovered to be an immense calculus. The calculus was ovoidal in shape; its long diameter more than two inches. Its weight (apoth.) being seven hundred grains. On analysis it was found to be a fusible calculus composed of organic matter, with phosphate of lime, uric acid and a little ammonia. On dividing the calculus longitudinally, there was found in its centre a small cavity in which was discovered a

nucleus, that when placed under the microscope of Professor Leidy, of the University of Pennsylvania, was proven to be a fragment of a leaf of a plant without the slightest doubt, as the cell structure was well preserved, and in the cuticle the respiratory stomata were distinctly visible. It is probable that the leaf may have been detached from a twig introduced through the urethra in the act of tittilation. A few days after the expulsion of the calculus per vaginam, a minute vaginal examination was made. A catheter was passed up the urethra into the bladder, and another by the side of this catheter, for some distance through the ulcerated opening, the edges of which were very rough and indurated, about one inch from the meatus urinarius, and circular in shape. In about thirty days after this examination the fistulous opening was found to have contracted to the size of the end of the index finger. The pain and uneasy sensation in the surrounding parts had subsided, her general health had very much improved, and the fistulous orifice still existed. She would not submit to an operation. For a more minute description of this case, I refer to the *Virginia Medical and Surgical Journal*, 1854, No. xviii, art. 2d.

CASE 2. Occurred in the person of a little negro girl, seven years of age, the property of Mr. N. B., of Petersburg, Va. I saw the case for the first time about the 1st of January, 1860. I found her presenting all the appearance of one who had been long the subject of great suffering, very much emaciated, frail and ill-grown. She had been suffering with pain and incontinence of urine for about four years, and was scarcely able to move about. There was a constant escape of urine, which had caused a great deal of soreness and irritation about the vulva. The anterior extremity of the vagina was very much contracted and indurated. On passing a sound into the bladder, I detected for the first time that there was a stone in the bladder. The position of the stone in the bladder was on the posterior side of the neck, pressing on the vagina. I moved the stone from its position to the fundus of the bladder, which afforded much relief, and a

great improvement in her general symptoms. There was great irritation of the rectum, as well as in the vagina. After micturition, or an evacuation of the bowels, her sufferings were intense. The evacuation of the bowels was always accompanied with prolapsus of the rectum. The bowel frequently would not return for fifteen or twenty minutes. The external labia were very much swollen and irritated by the constant rubbing and pressure made with the fingers to relieve the pain. I ordered her at this time an anodyne of spts. nitre dul., spts. camph., tinct. hyosciami, tinct. opii. with a wine-glassful of watermelon seed tea. Her sufferings were very much alleviated by the treatment. Owing to the inclemency of the weather I was compelled to postpone performing an operation on her for some time. After having submitted her to a course of preparatory treatment I decided to operate on her on the 29th of February, 1860. On the night previous I gave her a mild purgative which acted well on the following morning. On trial I found dilatation of the urethra impossible owing to the great irritation and sensibility of the parts.

I determined to adopt the urethral method or urethrotomy. With the assistance of my friends, Drs. W. F. Jones, J. B. Strachan and J. W. Claiborne, I placed the patient in the position for perineal lithotomy, and then put her completely under the influence of chloroform and ether. I proceeded to operate by introducing into the bladder the straight short staff used for operating on females, with my left hand I depressed the instrument, whilst the assistant with his right hand pressed the mons veneris upward. With my right hand I conducted a straight probe-pointed bistoury along the groove of the staff, and incised the anterior two-thirds of the urethra upwards to the infra-pubic ligament. On introducing my little finger I found the stone to be much larger than I had anticipated. With the index finger oiled and by slow and gradual pressure I dilated the neck of the bladder and sphincter freely. Along the side of the index finger of the left hand I introduced a pair of long duck-bill forceps into

the bladder and then passed the finger of the left hand into the rectum and pressed the stone up from the fundus of the bladder, and was successful in catching the stone by its long diameter, corresponding with the length of the forceps, and with gentle traction it was extracted with great facility entire. The calculus measured one inch and a fourth in its long diameter and two inches and a fourth in circumference. It was composed of the phosphate of lime and uric acid. Very little blood was lost during the performance of the operation. After the operation, the bladder was syringed out with a little flaxseed tea, and the patient replaced in bed with her knees tied together. I gave her a dose of the anodyne mixture. On the following night she had an accession of fever, some heat, and I ordered her a diaphoretic of spts. nitre, dul., vinum antimonii, liquor ammoniæ acetat.—a dose every three hours. She slept very well all night and complained of no pain except when passing her urine ; she retained her urine for three or four hours. On the third night after the operation I found her with some feyer, cough and suffusion of the eyes. On the next morning she was attacked with measles. I continued the diaphoretic with flaxseed tea. On the next morning I found the eruption had come out on the skin very well, but was accompanied with a great deal of fever with tenderness on pressure over the stomach, and nau-ssea ; gave a dose of the anodyne mixture. On the fifth day after the operation there was very little pain on passing her urine. She now slept very soundly, day and night, without the anodyne—a very peculiar symptom, I have observed, subsequent to the removal of the cause of irritation in the bladder. I first observed it in the case operated upon by Dr. P. C. Spencer, where a little boy, who had a very large calculus in the bladder, after its removal slept for nearly ten days—night and day—except when taking nourishment.

On the eighth day after the operation she retained her urine for six hours, and got up to the vessel when she wished to pass her urine. She was very much debilitated by the attack of measles, but her appetite improving, I ordered her beef

and chicken soup. The kidneys acted very well under the use of the diuretic of buchu and fluid extr. pareira brava—equal parts. Dose, teaspoonful three times a day with a little water. The edges of the divided meatus had contracted very much and were in close apposition. On the fifteenth day after the operation I allowed her to get up and walk about the room. She retained her urine perfectly during the day. She continued to fatten and improve. On the twentieth day after the operation I discharged the case perfectly cured and without a single unpleasant symptom.

It is now more than twelve months since I operated, and the patient is in perfect health and has grown very much. This case has demonstrated the great power of *dilatation* in the neck and sphincter of the bladder, and the rapidity of the contraction subsequent to the dilatation for the removal of so large a calculus in so young a subject. This operation removes much of the danger and peril accompanying the operation of lithotomy in females.

ART. IV.—DISLOCATION OF STERNAL EXTREMITIES OF SECOND,
THIRD AND FOURTH RIBS.

BY L. H. STEINER, M. D.

OF BALTIMORE.

Cases of dislocation of the sternal extremities of the ribs are rare, and are generally produced by violence applied directly to the anterior portion of the thorax, so as to tear, as it were, the ribs from their cartilaginous extremities. Some years since a case of this kind came under my observation, which I transcribe from notes taken at the time.

August 25, 1851, was called to see a colored man injured by the falling of a clay bank, which he had been undermining. I found him in the brick yard, where the accident had occurred, complaining of pain in his left side, where a considerable contusion had been produced. It seems that, when he perceived the clay bank was falling, he attempted to run, but his left foot slipping, he was thrown on that side,

presenting the right side of his chest to the falling clay. Upon further examination of the case, I found a depression to the right of the upper portion of the sternum, produced by the separation of the sternal extremities of the second, third and fourth ribs from their sternal cartilages, and the fracture of the anterior extremity of the fifth rib. The articulating surfaces on the end of the detached cartilages were quite as distinct to the touch as though no integument had been intervening. No difficulty was experienced in bringing the separated cartilages and ribs in contact, by forcibly drawing the shoulders back and applying a figure of eight bandage, but when this was accomplished the irritation was so excessive, doubtless proceeding from a spicula of bone belonging to the fractured fifth rib, that I feared to persist in the application. The symptoms of traumatic pleurisy developing themselves on the day after the accident, required very careful attention, and any attempt at coaptation of the dislocated ribs was given up as impracticable.

The patient in a few days was relieved of his pleurisy, and the ribs formed adhesions back of their old points of articulation. A cavity existed at the place of the dislocation, but no inconvenience was experienced by the new positions of the ribs.

ART. V.—A CASE OF HÆMATOCELE.

BY A. CLENDINEN, JR., M.D.

OF BALTIMORE.

January 27, 1860, a man residing in Anne Arundel county, and a former patient, called at the office, complaining of a scrotal tumour. More than two weeks prior to date the right side of the scrotum had been bruised whilst riding on horseback. Slight pain followed, with considerable ecchymosis, and in a few days enlargement of that side became perceptible, increasing to triple the size of the other. At this period a physician was called in, and after plunging a small trocar into the anterior and inferior portion of the tumour at a

a point about half an inch to the right of the *raphé*, and obtaining no fluid, but, to use the patient's words, "a very small amount of thick pinkish matter," he told me it was a fungoid growth and would have to be removed, advising him to go at once to Baltimore and have the operation performed. I found the testicle normal in size and sensitive to touch, occupying a superior and posterior position and surrounded by fluid, which could be made to fluctuate. The tumour was manifestly not a hernia, it had the form of a hydrocele, but was too heavy, and on placing a light posteriorly its lower and largest portion was found to be perfectly opaque. These circumstances, together with its comparative firmness (conveying to my mind the idea that I was handling a clot of blood), its former history, as also that of another somewhat similar case, led me to the diagnosis of a hæmatocele. Taking a straight bistoury and introducing it at the spot designated as the recent puncture by the trocar, I laid open the tunica vaginalis to the extent of two inches or more. Quite an amount of coagulated blood was now turned out by the finger, the first portion of which was almost colorless; a discharge of from three to four ounces of sanious fluid followed and the wound was closed.

Some six weeks after this the same man again appeared at the office, and I had occasion to introduce the trocar to relieve him of an apparent hydrocele on the same side. Some eight ounces of sanious fluid were discharged, but no coagula. He told me that on going home the former wound had healed kindly, but that about the same time he had a very severe attack of malarious fever, after which on attempting to work, the accumulation of fluid commenced. He was at the time I saw him quite anaemic, a *bruit de soufflet* was present and he was frequently troubled with epistaxis. Supposing the hydrocele to be a local manifestation of defective nutrition, I gave him small doses of strychnia with citrate of iron and quinia in solution. It has been more than a year since and there has been no recurrence of the troubles. I saw the man a few days ago well.

ART. VI.—THE CONICAL TREPHINE.

BY T. W. GLOCKER, M. D.,

Clinical Reporter at the Baltimore Infirmary.

In the *American Medical Times* for January 5th, 1861, an article appears setting forth the use of a trephine claimed to be invented by Dr. G. A. D. Galt, of Virginia.

Accompanying the article is a wood cut representing his instrument; a concise description of which I propose to give, following the account as given in the above mentioned journal. It consists of a truncated cone with spiral peripheral teeth and oblique crown teeth; when applied the peripheral teeth act as wedges so long as counteracting pressure exists on the crown teeth; upon the removal, however, of that pressure its tendency is to act as a screw; but owing to its conical form and the spiral direction of its peripheral teeth its action ceases, thus preventing all liability to injury of the membranes of the brain.

Now, as has been before stated, Dr. Galt claims to be the originator of this instrument. He does not, however, deny the existence of conical trephines with longitudinal peripheral teeth; but states that his differs from all others in their spiral direction.

The purpose of this article is to prove to Dr. Galt, that he is mistaken in regard to the non-pre-existence of conical trephines, the peripheral teeth of which run, not in a longitudinal direction, but are inclined spirally.

Among the instruments in use in the Baltimore Infirmary is a box of trephines, which has been in the possession of the house for some years, and which belongs to Professor N. R. Smith, one of the attending surgeons. Dr. Smith purchased these instruments some twenty years since of a physician who was selling off his effects; it is thus seen that they were not new when they came into Dr. Smith's possession, though unfortunately nothing of their previous history is known. They have the Paris mark but no name.

These instruments appear to be very old, as may be judged by the appearance of the handle which is fashioned like a carpenter's brace, the same as represented in many old surgical works; the point which fixes the trephine and keeps the saw from slipping from its position does not retract within the instrument, but after the teeth have cut a channel in the bone, it is removed and the point entirely withdrawn by means of a wrench especially adapted for the purpose; these facts would tend to prove the antiquity of the instrument. But it is of the saw itself that we have especially to speak. It differs in no particular from that represented and described in the *American Medical Times* as the invention of Dr. Galt. It consists in form of a truncated cone with the peripheral teeth inclined in a spiral direction, and as the crown teeth are continuous with each one of the peripheral teeth, these are set obliquely. The principle of its action is precisely as stated by Dr. Galt. After the pressure is removed from the crown teeth its progress is entirely interrupted, and no amount of strength will suffice to force the instrument farther. Several experiments were made relative to this point by Professor Hammond, myself, and others, but we found it impossible to make the instrument advance after the perforation of the skull.

In a subsequent number of the *Times* Messrs. Otto and Reynders describe an old trephine which so far as I can perceive is identical with those we have in the Infirmary.

Of course it is not the object of this communication to reflect upon Dr. Galt. On the contrary, I think he deserves commendation for calling attention to a valuable but almost forgotten instrument, and I have no doubt but that the idea was altogether new to him. Before inventing instruments, however, it would be well for those ambitious of distinction in this line to be sure that they have not been anticipated. The older surgeons were so prolific in this direction that it often happens that what are called new instruments are found figured by Scultetus, Heister, or some other worthy of a former day.

TRANSLATIONS.

ART. I.—A LECTURE ON APOPLECTIFORM CEREBRAL CONGESTION
IN ITS RELATION TO EPILEPSY.

BY M. TROUSSEAU.

Gentlemen: You are aware that there exists in our science an opinion that apoplectiform cerebral congestion is a common disease. This is a fact so well established, so well received, that one could not well appear to doubt it.

During two years which I spent as Resident in the Insane Asylum at Charenton, I saw, or rather I thought that I saw, a tolerably large number of apoplectiform congestions. Since this period I thought that besides these, I had seen a certain number of them either in the hospitals or in my private practice; but for fifteen years I no longer meet with any. Nevertheless, my colleagues see as many of them as formerly; the result of this, then, must be, either that I am mistaken or that they are. It is very evident that I can entertain no other idea than that the error is on their side—otherwise I would change my opinion.

Let us see then.—A man, either with or without premonitory symptoms, is suddenly seized with apoplexy; he is picked up in a state of stupefaction, and for a quarter of an hour, an hour, and possibly longer, he continues heavy-headed, confused in intellect, and with uncertain steps. On the morrow all is past.

They say that this patient has had an apoplectiform cerebral congestion. I have said so like the others, but for fifteen years I say so no more.

Another, while walking, suddenly becomes dizzy; he ceases to see, to speak; he mutters some unintelligible words; he staggers, sometimes he falls, but rises immediately afterwards. This has lasted a few seconds; nothing remains but

a little heaviness of the head, sometimes a momentary cloudiness of intellect, and three or four minutes suffice to restore everything to a natural condition.

They say that this patient has had a slight cerebral congestion. I, too, have said so, but for fifteen years I say so no more.

Why, then, gentlemen, have I changed my mind? It is certainly not through love of the paradoxical. It is that facts have forced a new light to dawn upon my mind.

In the year 1845, one of my friends was found in his bed in a state of unconsciousness. His face was swollen and of a violet hue; intellect, motion and feeling were gone; there was stertorous breathing. This was a vigorous man, forty-two years old. How long had he been in this state? His wife could not say; she had been awakened by a strange snoring, and she had sent in search of me. At this period I had already given up bleeding in apoplexy. I had the patient placed in bed in a half-sitting posture; I slapped his face with a handkerchief wet with cold water; I applied two ligatures above the thighs in order to retain momentarily a large quantity of venous blood in the vessels of the lower extremities; then I waited. An hour had hardly passed when motion was restored, feeling was being re-established and the patient replied pretty clearly to the questions that were put to him. On the morrow, excepting a painful stiffness of the loins, no trace of the storm remained.

Some time after this I was called in great haste to see one of my neighbors, aged seventy years, who, while on the boulevard, had been seized with an apoplectic fit. He had remained unconscious for fully a quarter of an hour. I arrived just at the moment that his senses were returning. He did not as yet recognize me, gazed about him in a stupefied manner, and tossed his arms and legs about without knowing what he was doing. His lips and nose were puffed out, and his eyes were injected. Gradually everything was restored to its natural condition without my having had recourse to any active medical treatment.

The whole affair lasted some hours.

The servant man then told me that his master had had several attacks of this kind within the space of two or three years, and that they had passed off in the same manner—once after he had been bled, the other times after using a mustard foot-bath.

The same year I was consulted in my office by a lawyer from one of the provinces, aged thirty-five years, who within six months had three attacks of apoplexy. He had been bled each time, and he thought he had derived much benefit from this; they had purged him, and each month he was leeched in the region of the anus. The last attack had taken place as he was going up the steps of his house after pleading an important case. His head had struck upon the steps and the patient still bore traces of a pretty deep wound in the forehead. His intellect, sensibility and power of motion were in a perfectly good condition when I saw the patient, and the apoplectiform attacks had lasted, at most, one hour.

I am but a small believer in apoplexy among people of thirty-five years of age, especially when these apoplectic attacks recur every two months, and immediately the idea of epilepsy presented itself to my mind, and I therefore disclosed my fears to that one of my colleagues who had sent the patient to me. The reply was that nothing justified my suspicions, and that no convulsions had ever been seen. I still maintained my diagnosis, and a short time afterwards, in the midst of an audience, the poor lawyer was seized with an attack of falling-sickness which unhappily left no doubt in the mind of any one, and he was obliged to give up his profession. In the meanwhile, my attention had been awakened. I asked myself whether so many people that I had seen with apoplectiform cerebral congestions were not epileptics, and I was watchful.

My first patient soon had other attacks, and now he has sometimes as many as four and five attacks of epilepsy in a day, and very often vertigos of little consequence, his sight is lost and his intellect is sadly altered.

As for the old man, of whom I have also given a summary account, he still lives, and almost every year he has one or two of these attacks. Since his fall upon the boulevard he never goes out without a servant, and this man has told me that at the moment when his master is lying upon the ground his face undergoes contortions, and he has twitchings in one of his arms, which hardly last a minute, but which amply suffice to characterize epilepsy.

Since this period, every time that I have been consulted concerning a person suffering from apoplectiform cerebral congestion, I have sought out, with the greatest care, whether, from time to time, during the day, there had been observed sudden and rapid vertigos with the characteristics that I have indicated above; whether these attacks of congestion were not rather nocturnal than diurnal; whether at the commencement of the attack there had not been nervous movements, and almost always, when the attack came on in the presence of witnesses, the convulsions could be recognized.

When the congestion had taken place at night, during sleep, I learned that the urine sometimes passed involuntarily, and that for several days the tongue was sore. The face, forehead and neck were covered with small echymotic spots, like flea-bites. I learned, moreover, that the attacks recurred at rather shortened intervals, leaving no lasting trace behind. In one word, epilepsy was evident enough when it was sought for, when one wished to find it.

There is not a month passes that I do not see in my office some patients said to be suffering from apoplexy, who are epileptics. There is, perhaps, not a week that I am not consulted by adults, old men, and children, suffering with epileptic vertigos, and who have been referred to me as having slight cerebral congestions. And although epilepsy, in all its forms, is better known at the present day than it was twenty-five or thirty years ago, nevertheless many physicians refuse to believe in so terrible a disease, and if they recognize it they do not wish to tell the family what they think about it, and prefer to leave this sad mission to us.

Very often epileptic vertigo reveals itself in attacks which are always attributed to cerebral congestion and to which those physicians who are occupied with the treatment of the insane have, long since, called the attention of their colleagues.

After the vertiginous attack, it is quite common to see the patients delirious for some minutes; the delirium may even continue for a considerably long period.

The judiciary annals, the archives of the prefecture of police are filled with suicides and murders which are too often attributed by physicians to what they call cerebral congestions, while they ought to be attributed to epilepsy.

One may say, almost without fear of being mistaken, that if a man who has had no premonitory trouble of intellect, who has heretofore given no sign of madness, who has not been poisoned by alcohol, or by any other substance which exercises an energetic action upon the nervous system, commits suicide or kills any one, one may say that such a man is an epileptic and that he has had a severe attack, or rather, what is more common, a simple epileptic vertigo.

These strange acts are, I repeat, attributed by most physicians to passing cerebral congestions, for this reason, that the fully developed attack is often unnoticed, and the simple vertigo is almost always so.

There is a reason which most often causes epilepsy to be unknown; this is the repugnance which families have to revealing this sad disease to physicians. Even when a mother has been a witness to a fully developed attack, she refuses to believe it to be epilepsy, and if the physician questions her, she speaks of the coma, of the loss of consciousness, but will most often refrain from mentioning the convulsions. She will call for aid against the accidents which follow the attack, but she is careful to avoid suspicion of the sad truth. I have often been consulted by persons who knew full well that they were suffering from epilepsy, but who spoke to me only of congestion; wives kept back the true state of their husbands, husbands the state of their wives, and most often, parents, the

symptoms experienced by their children. The physician then is always deceived concerning epilepsy; he is deceived by the patient himself who knows nothing of his attack, excepting that he has lost consciousness, and that he remained several hours in a state of half stupefaction. He is deceived by the parents who are loth to acknowledge, even to themselves, that they have an epileptic in their family. He is deceived by the recollections of his early medical education during which he has been repeatedly told that apoplectiform cerebral congestion is a common disease. Let us not, then, be astonished if congestion is still so generally accepted.

There is, I concede, a convulsive form which assimilates a cerebral congestion. It happens, sometimes, although very rarely, that, at the commencement of an epileptic attack, the tonic period, that is to say the one during which the muscles of the chest preserve an absolute rigidity; it happens sometimes, I say, that this tonic period lasts two or three minutes, instead of lasting only fifteen or thirty seconds, and the individuals die asphyxiated, as persons die in a tetanic paroxysm, as animals die who have been poisoned by substances containing strychnia, as our colleague, M. Ségalas, has so well demonstrated nearly forty years ago.

As, in this case, there have been no chronic convulsions, such as are best known to persons outside of the profession, and as during the whole continuance of the tonic convolution the face has been swollen, the vessels of the neck have been distended and knotty, as in fact there has been an enormous congestion, but an entirely passive one, similar to that which produced by exertion, it is mistaken for an active congestion, while in fact it is only an attack of eclampsia or epilepsy.

Let those of our colleagues who devote most of their attention to the diseases of women in child-bed and children, recall their experiences, and probably they will partake of my opinion. Dr. Menière has observed for a long time a large number of patients who are suddenly seized with vertigo, nausea and even vomiting, who fall upon the ground, after having

walked like drunkards, rise with difficulty, remain pale, covered with a cold sweat, almost in a comatose state; and see these accidents very frequently recurring. The first attacks are considered cerebral congestions and are vigorously treated by bleeding, leeches and purgatives. The frequent relapses modify gradually the diagnosis, but the patients become exceedingly uneasy about them, and especially the doctors, and all enlightened persons who are aware of the seriousness of cerebral lesions.

In the vast majority of cases, patients affected with these cerebral troubles soon perceive noises in their ears, often even the hearing becomes embarrassed, and these unnatural sounds cause those persons, who wish to free themselves from such an annoyance, to seek the aid of the physician of the asylum for the deaf and dumb at Paris. It is easy, then, to prove that one ear and often even both are singularly enfeebled, and M. Ménière has collected hundreds of observations establishing the fact that these supposed lesions of the brain are really lesions of the auditory apparatus. He has pursued these researches with extreme care, and he has been able to prove that the starting point of these phenomena is in the internal ear. We will let our colleague bring here the result of so highly interesting a study. It will suffice for us to say that the greater part of the troubles so improperly designated under the title of apoplectiform cerebral congestion have their seat in the semi-circular canals, that the lesions of these organs produce vertigos and sympathetic vomiting, take away the power of the limbs, and bring about sudden loss of consciousness; in a word that many of the so-called lesions of the brain belong exclusively to the auditory apparatus.

There is still another disorder which is constantly designated by the title of cerebral congestion; I speak of vertigo connected with gastric disorders. This varied form of nervous disease is characterized by the following phenomena. If the patient makes a sudden motion in bed, the bed seems to turn round and carry him with it in its motion; if he rises, and especially if, having risen, he looks upwards, the

vertigo becomes more excessive. As objects turn around him, he reels, and sometimes is unable to stand. At the same time, he experiences an insupportable sickness at his stomach and very often vomits. These singular attacks are called by the patients rushes of blood to the head, and we must say, the greater part of physicians partake of this idea. They bleed, they apply cups and leeches, give mustard foot-baths, and, in a word, do everything to dispel this imagined congestion, which they increase by their strange treatment.

The vertiginous diseases of which I have spoken are rather akin to syncope, and consequently are just the opposite to congestion; and, strange as it may appear, it is nevertheless true that too many physicians still do not recognize the tendency to syncope, and confound it with cerebral congestion. Nevertheless, gentlemen, as I do not wish to exaggerate, I will suppose that the two states that I have been describing are rarely unknown to physicians, and I will suppose that they are never taken for cerebral congestions. But there is an attack which often accompanies hemorrhages of the brain and which, by the generality of physicians, is considered a congestion.

I explain myself. When a patient is seized with apoplexy, whether this apoplexy be caused by a cerebral hemorrhage, whether it depend upon a softening, which is more frequently the case than it is acknowledged or thought to be, or whether it be the result of an embolus, or at least of a sudden obliteration of one of the principal arteries at the base of the brain; when, I say, a patient is seized with apoplexy, there is sometimes a sudden loss of consciousness, and the dullness of the intellect, and the loss of the power of motion last several hours or even days, then everything is restored to a natural condition, with the exception of a slight hemiplegia, which diminishes slowly and finishes by disappearing after some months. As the first attacks have been almost fulminant, and as there does not seem to be a sufficient relation between the severity of these first phenomena and the ulterior troubles of intellect, sensibility and motion, they say that the cerebral hemorrhage

has been accompanied by a congestion ; that the congestion, an essentially transitory phenomenon, has produced the apoplectic attacks properly so-called, and that, when it has passed away, it has left this slight hemorrhage together with another slight hemorrhage which has followed these severe apoplectic attacks.

I do not wish absolutely to deny the existence of such a congestion, and I even acknowledge that I am tempted to admit it in a certain degree ; but there is another phenomenon which has not been sufficiently taken into account, at least so far as I know. I wish to speak of what I have called the *cerebral astonishment*. When the brain suddenly experiences a tearing and a compression, it bears this grave lesion with an impatience which varies according to the individual, but which can be borne to a very great extent by certain persons. I will offer as an example one of the traumatic lesions of the brain. When a soldier receives a ball in his head, or when in a fight, an individual receives a stab from a knife which penetrates into the brain, they are thrown to the ground as if they had been struck by a bludgeon ; but little by little, notwithstanding the intra-cranial effusions of blood which are the consequence of the wound, and even notwithstanding the inflammatory congestion which is inseparable from the laceration of the tissues, intellect, sensibility and power of motion return sometimes with wonderful rapidity, and thus afford, to the inexperienced surgeon, hopes which are never realized. This immediate stupor is what I have called the *cerebral astonishment*, and however incorrect this appellation, which I will willingly renounce, may be, still the fact always exists and can be contested by no one.

Experiments upon animals give still more positive results. If one trephine the skull of a dog or a rabbit and introduce a small ball of lead through an incision in the dura mater, between the skull and the surface of the brain, one will observe at the very outset, phenomena of stupor, which rapidly pass off, to be replaced by a hemiplegia which is proportionate to the amount of compression.

In this experiment one cannot plead cerebral concussion as a cause—one must allow that the brain is in a manner surprised by an accident which shows itself in transitory disturbances. Am I not, then, right in supposing that when a sudden extravasation of blood takes place in the striated body or in the optic thalamus, the immediate stupor which is ordinarily attributed to the simultaneous congestion may, in part at least, be attributed to *cerebral astonishment*.

Can it be said, gentlemen, that I deny absolutely the existence of cerebral congestion? Certainly not. I admit the existence of congestion, hyperemia of the brain,—one would be mad to contest the existence of it; but I do say that what has been called an *apoplectiform cerebral congestion* is, in the majority of cases, an epileptic or eclamptic attack, sometimes a syncope. I say that, very often, simple epileptic vertigos, or vertigos connected with a disordered state of the stomach, or from diseases of the ear, are wrongly considered congestions of the brain.

Moreover, if the propositions that I have endeavored to defend be true, it will be granted that therapeutics ought less frequently to have recourse to revulsive and antiphlogistic treatment, which is continually resorted to to combat these supposed cerebral congestions, and that other indications should be sought out, more conformed to the idea which one ought to form of the different states that have too often been confounded under the same denomination. W. McN. W.



ART. II.—THE PREPARATION OF XANTHIN.

BY STAEDELER.

Having remarked that the tribasic acetate of lead does not completely precipitate xanthin and its analogues, Staedeler had recourse to acetate of mercury to effect the precipitation;

treating it afterwards with sulphhydric acid the mercury is removed and a solution is obtained of the substances sought, sometimes mingled with tyrosin and creatin.

The material may be prepared as follows:—It is cut into small pieces and bruised with powdered glass or silicious sand, then mixed with alcohol, heated and expressed; after this it is digested for some hours with water at 52° C., expressed, and the two liquids are united, boiled and treated with acetate of lead and mercury.

The precipitate thus formed contains about one twenty-sixth part of the xanthic bases. Of the small quantities present the following results will enable us to judge: From the muscular tissue of the dog 0.025 in the 100 was obtained; from the liver, kidneys, pancreas and muscular tissue of the ox 0.0113. The salivary and thyroid glands, and the brain of the ox contain still less. As regards the separation of these bases, see the following articles.—*Annal. der Chem. und Pharm.*.

The Xanthic Alkaloids of the Animal Organism. By SCHERER.

This contribution of Scherer gives some little order to our knowledge of the *xanthic* bases, which include *xanthin*, *hypoxanthin*, *xanthic oxide*, *guanin*, *sarkin* and *xantho-globulin*, congenerous substances all to be found in the animal organism. Something is already known of these bases; and the author has recently discovered xantho-globulin in small quantity in different organs, and among others in the liver and spleen. It is a yellow substance appearing in the form of globules under the microscope, reacting with nitric acid like hypoxanthin, with this difference, that the product of the reaction, instead of becoming a reddish yellow from contact with potassa, becomes a decided red and afterwards a violet in the cold.

Sarkin is identical with hypoxanthin, as Strecker has shown. Xanthin separates with the greatest facility from hypoxanthin and from guanin, when weak chlorhydric acid is employed, which rapidly dissolves the two last and acts upon xanthin very slowly.

Scherer found the following proportions in 100 of horse flesh :

Hypoxanthin	- - - - -	0.014
Creatin	- - - - -	0.038
Xanthin	- - - - -	0.002

And the following was the result in 100 parts of the pancreas of the horse :

Guanin	- - - - -	0.012
Xanthin	- - - - -	0.017
Leucin	- - - - -	1.77

Hypoxanthin is precipitated by acetate of copper, if not immediately, yet the precipitate will take place in the warm ; the green flakes contain all the alkaloid ; they are soluble in acids ; nitrate of silver also precipitates this alkaloid. *Hypoxanthin* is soluble in alkalies and acids ; with nitric acid it forms a prismatic combination. Phospho-molybdic acid occasions a yellow precipitate in boiling nitric acid ; on cooling there is deposited a yellow powder formed of cubic crystals. Heated on a slip of platinum foil with a little nitric acid, this alkaloid furnishes a white residuum becoming yellow on contact with caustic soda ; heat does not alter its color ; should it become red one would be authorized to pronounce on the presence of xanthin. Purified by washing with chlorhydric acid, the base forms elongated prisms, with this composition,— $C_{10} H_4 N_4 O_2$, $HCl + 2HO$. From these crystals, pure hypoxanthin can be procured by treating them with ammonia ; there results a white powder more soluble in warm than in cold water ; nitrate of silver occasions a precipitate in such a solution. The pancreas seems absolutely devoid of hypoxanthin.

Xanthin is likewise precipitated by phospho-molybdic acid, as well as by acetate of copper and nitrate of mercury ; nitrate of silver does not precipitate it except in presence of excess of ammonia. Slightly soluble in cold water, it dissolves in 1154 parts of boiling water; its insolubility seems to increase on contact with water, resembling, in this particular, the para-

cholic acid of Strecker. It is very soluble in alkaline solutions, especially those of ammonia. As for leucin, Scherer has satisfied himself that it pre-exists in the pancreas and is not a product of alteration.—*Journ. de Pharm. et de Chem.*

L. H. S.

REVIEWS & BIBLIOGRAPHICAL NOTICES.

I. *On Diphtheria.* By EDWARD HEADLAM GREENHOW, M. D., Fellow of the Royal College of Physicians, Physician to the Western General Dispensary, and Lecturer on Public Health at St. Thomas' Hospital. New York, London, &c. Baillière Brothers. 1861.—(Concluded.)

Before passing to a glance at the morbid anatomy we will insert here a paragraph from Dr. Greenhow on the manifest signs of danger during the progress of the disease:

"The signs which indicate great danger in diphtheria are, croupy symptoms consequent upon the extension of the disease to the larynx or trachea; the occurrence of pneumonia; a brown or blackish appearance of the false membrane; hemorrhage from the nose, throat, bronchial tubes or intestines; purpura; copious discharge from the nostrils; intense albuminuria; great swelling of the cervical glands; marked diminution of temperature, and sickness or diarrhoea, especially at an advanced period of the illness. Any one of these symptoms denotes that the case is severe; but when, as sometimes happens, two or three are combined, the patient must be regarded as in imminent danger."

Some of the writers of the seventeenth century regarded hemorrhage as a fatal symptom. Our author quotes the following passage from *Villa Real*: "Observavi sapissime, sanguinis narium aut oris fluxum, in hoc morbo esse lethalem;

nullum enim vidi liberatum ex his, qui sanguinem è naribus aut ore rejecerunt." We recently attended a gentleman, phlethoric, of sedentary habits, and subject to throat diseases, who called us in to see him for a violent sore throat, with extreme congestion of the mucous membrane of the tonsils, fauces, &c. We gave suitable remedies and scarified the tonsils slightly, which produced moderate bleeding and gave considerable relief. Subsequently the pellicles of diphtheria made their appearance, and the following day a profuse hemorrhage took place from the right tonsil, which was most deeply congested. The hemorrhage was arrested for the time being by the use of ice and the muriated tincture of iron. After the lapse of twenty-four hours it again broke out with renewed force, and persisted until he was brought almost to a state of fatal syncope. The muriated tincture was again used freely, as drink, diluted, and as gargle, and the liquor ferri persulph. was additionally applied by means of a probang. Ice was used internally and externally, and firm pressure was made upon the carotid artery. He rallied under the treatment, but the tendency to hemorrhage continued for several days, and in his prostrate condition, required great watchfulness.

We may here remark, though a little out of place, that M. Bouchut advises the ablation of the tonsils early in the disease for the purpose of removing the exudation, and of facilitating respiration. Dr. Slade opposes this practice as dangerous, but remarks: "The removal of the tonsils in this disease might possibly be practised upon an adult when there is great tumefaction, and for the purpose of facilitating respiration, and for this purpose only." We cannot approve of it. In the case we have cited above, when our patient could so far open his mouth as to give us a view of the tonsil, there was a deep excavation in the centre in which the sponge of the probang could be readily lodged. This excavation had the appearance of a deep ulcer; it was more probably but the indentation made by false membrane, which had been cast off, in

the tumefied substance of the gland. The excavation disappeared rapidly as the tumefaction subsided. We think ablation in such a case would have been almost surely fatal. We will now take up the morbid anatomy.

"Diphtheria is essentially an inflammation of the fauces," says our author, "which sometimes only causes disordered secretion from the mucous membrane; at others, produces ulceration and even gangrene; but more frequently, an exudation which, coagulating on the surface forms the false membrane from which the disease obtains its name. The exudation varies in consistency. * * * * Sometimes it is not membranous, but dry and granular.

"Low forms of cryptogamic plants are occasionally found on the exudation, a circumstance which gave rise to the belief that the disease is of parasitic origin. This opinion is disproved by the facts," &c.

We may here interpose that this opinion is not established, but the facts are not yet adequate to disprove it.

"The mucous membrane beneath the exudation, or from which the exudation has recently exfoliated, is often intact, and generally much congested and swollen; sometimes it is white, opaque, or unnaturally pale; at others it looks raw, the epithelium having been shed with the false membrane. It often presents an excoriated or roughened appearance; is sometimes ulcerated, and more rarely gangrenous. When false membrane still adherent to the mucous surface is lifted up, it is often seen to be attached to the subjacent surface by numerous small, thready adhesions, as though processes of exudation passed into the mucous follicles; and on removing it, the mucous membrane is more or less abundantly dotted with bloody points."

Our author says that the mucous membrane is sometimes gangrenous. We think it a legitimate subject of doubt whether such condition ever belongs to diphtheria. Bretonneau insists that the mucous membrane remains unaltered throughout. He showed at a very early period that the apparent gangrenous condition of the throat, so frequently observed, was owing merely to the decomposition of false membrane, blood, &c., while beneath the decomposing mass, the true mucous membrane retained its integrity.

Rilliet and Barthez, on the subject of the pathological anatomy of the disease, use the following language :

" In the pharynx the false membrane forms a large plate, a sort of yellow covering to the mucous membrane, sometimes continuous, sometimes disposed in broken or interrupted layers. The false membranes have sometimes a gray color, which led for some time to the belief that they were the result of gangrene ; but the gangrenous aspect of the pharynx is due to the putrid degeneration of the follicular concretions themselves.

" The exudation of blood, which is not unusual in diphtheritic inflammation, completes the error. The false membrane, colored by this fluid, successively assumes different tints, marks of its decomposition."

Congestion, erosion, ulceration, &c., are frequently observed upon the mucous membrane in diphtheria, but we are not convinced that that membrane ever becomes gangrenous as a part of the disease. We are not quite so sure that gangrene has not sometimes been produced by overactive cauterization ; which has often been carried, we fear, to the disintegration and death of vital tissues.

The submucous tissue, the tonsils, the œsophagus, the muscular and other adjacent tissues, are often deeply congested, or infiltrated with blood ; the parotid and submaxillary regions are tumefied and mottled. In the larynx and trachea, the membrane, when it descends into them, generally becomes thinner and less consistent as it descends, until it gradually disappears. The subjacent mucous membrane is generally so congested as to diminish appreciably the calibre of the tubes. The epiglottis is often swollen. The lungs, the heart, and the kidneys are affected in proportion to the various complications in which they may be involved. The membranes of the brain and cord have been found in a state of suppurative inflammation, and it has been suggested that "the paralytic symptoms so common in a late stage of diphtheria may arise from the disease having extended, by continuity from the fauces to the upper part of the cord."

Upon this our author remarks :

"At present this opinion can only be received as suggesting a careful examination in future post mortem examinations; for thus only can it be determined whether the paralytic affection has a constitutional origin, or arises from the supposed local disease."

As albuminuria is so common an attendant upon diphtheria we may suppose, *a priori*, that the kidneys are affected, as indeed they are. Microscopic examinations sometimes show them to be much diseased, when to the naked eye they appear perfectly healthy.

We do not wish to try the patience of our readers by digressions, but there is one point to which we wish to call attention before passing to consider the treatment. Are the epidemic sore throats which have prevailed so frequently among us of late years of the same nature as diphtheria, or are the two of no kindred? Many writers speak of diphtheritic fever when there is no development of diphtheria, but where other manifestations concur with the characters of that disease. All of us see, habitually, cases of sore throat and fever prevailing very widely, when in but few instances, comparatively, (at least in our experience,) is there any appearance of false membrane. It may or may not be right to call cases diphtheritic, when there is no membrane, from a general resemblance of symptoms. We will not argue this point, but the construction we put upon the matter inclines us to believe that the angina is the real disease in all cases, and that the diphtheritic formation may be considered an epiphenomenon. The angina may be owing to general causes more or less widely diffused; the membranous formation may be owing to a vegetable parasite which would scarcely find a lodgement upon healthy membrane, but which rests, and grows, and thrives, upon tissues enfeebled or broken by disease. We have several cases now under treatment wherein a touch of the spoon handle upon the inflamed tonsils is followed by an oozing of blood. There is no false membrane visible, but we would think the parts just ready to form a favorable nidus for parasitic spores, if by any chance they should be carried to them.

Under the head of "*Suggestions for Treatment*," our author indicates the principles which should govern the practitioner, without going extensively into detail. He tells us that the treatment must meet both local and general indications. Each case requires its own modifications of treatment; there is no specific remedy. General depletion is not admissible; the patients usually require to be sustained. Leeches, blisters, and fomentations, are often used externally. Our author disapproves of them. Local treatment internally, has its advantages, but has been used injudiciously by many practitioners. Tearing away the false membranes forcibly and using caustics is very mischievous.

"Observing that removal of the exudation and the application of remedies to the subjacent surface neither shortened the duration nor sensibly modified the progress of the complaint, but that the false membrane rarely failed to be renewed in a few hours, I very soon discontinued this rough local medication to the tender and already enfeebled mucous membranes. The propriety of this course became evident at the very first post mortem examination I had the opportunity of witnessing, and has been confirmed by all my subsequent experience. In the first place the application can but rarely extend to the entire diseased surface; and in the next, the subjacent tissues are so deeply involved in cases of really malignant diphtheria, that any application to the surface of the mucous membrane could apparently exercise no beneficial influence upon the disease. The same observation applies with even greater force to the indiscriminate use of strong solutions of chloride of zinc, or of Beaufoy's solution of chloride of soda."

While caustic applications are so objectionable, milder applications are very serviceable. Gargles of moderate solutions of borax or alum, or of nitrate of silver, or diluted chloride of soda (half a drachm of the solution to the ounce of water) sweetened with honey, are very useful. Light touches with the solid nitrate of silver are often advantageous.

As general remedies, an emetic is usually advisable in the first stages; and then the chlorine mixture commended by Watson, or a solution of chlorate of potass in syrup and water, with a minim of diluted hydrochloric acid for each

grain of the salt, and the tincture of the sesquichloride of iron may be used. "The tincture of the sesquichloride of iron, first recommended in the treatment of diphtheria by Dr. Heslop, of Birmingham, has been so generally adopted by the profession, as to afford a guarantee that it has, in the main, been equally useful in the hands of others. There are, nevertheless, cases in which I have found chlorate of potass more useful, and there are others in which the combination of the latter with the tincture of iron is a better remedy than either of them separately."

He particularly recommends the tincture of the sesquichloride in albuminuria; in hemorrhages and purpura, he gives it combined with dilute hydrochloric acid.

The sesquicarbonate of ammonia and alcoholic stimulants are necessary where there is a great tendency to depression. If regular croup supervenes it must be treated by emetics and calomel, "if there is no special reason to the contrary." Finally, tracheotomy offers a resource when all other means are unavailing.

A due amount of nourishment must always be allowed. Beef tea, arrow root, milk, cream, soft boiled eggs, etc., are generally appropriate during the acute stage; afterwards, solid food, in small portions, gradually increased. It must always be remembered that hasty exposure, or exertion, during convalescence, is very hazardous, no matter how slight the attack, or how favorable the progress. Complications and sequelæ must be treated upon general principles.

The above is a brief summary of our author's excellent suggestions. We have but little to add to them. In former times bleeding, general and local, and such powerful remedies as calomel, were over freely used; they are now rarely resorted to. Diphtheria, like scarlet fever, rather requires judicious management than active medication. We fear that *nimia diligentia* has added greatly to its mortality. It has been our custom for years to treat scarlet fever with the least medication, and in the mildest manner possible, with the most gratifying success; and from our first acquaintance

with diphtheria, we have treated it upon the same principles. We have not only nothing to regret from pursuing this course, but we have every reason to be satisfied with it. In the February number of this *Journal*, among other selections, appeared an article by M. Limousin, physician to the Hospital of Bergerac, on "Expectation in Diphtheria." The views and statements of this gentleman are very much in accordance with our experience. *Malignant sore throat* was carrying off cases in his own vicinity, where active cauterization had been resorted to in the hands of other practitioners. He had under his charge patients with pseudo-membranous angina, but it happened that none of them were of the malignant kind. He inferred that his cases must have been of a different nature from the formidable disease known as diphtheria. He was soon undeceived, however. Some very bad cases came under his hands, and recovered under the mildest treatment. He profited by the lessons before him. "It is obvious," he says, justly enough, "that brushing the pharynx of a person in health with a corrosive acid would be calculated to induce very serious illness. When pseudo-membranous deposits exist in the fauces, this imprudent practice may cause the disease to spread to parts which would otherwise possibly have escaped contagion."

We beg our readers to ponder on this subject before resorting to heroic treatment.

In our own practice we use gargles of a solution of bicarb. sodæ, with a little honey or sugar. We sometimes make external and internal applications of oil of turpentine—as a gargle, ten or twenty drops of turpentine in a wineglassful of sweetened water. We use the tincture of iron, and muriatic acid (which has long been a favorite remedy with us in the angina of scarlet fever) and we direct the patient, if sufficiently intelligent, to let them pass over the affected parts very slowly when swallowed. We use from five to twenty drops of either, largely diluted. Besides using soda as a gargle, we frequently direct a solution of it to be swallowed, for if there be cryptogams in the passages, the soda

has a parasiticide influence; and that the cryptogam is generally present is sufficiently shown, whatever value may be attached to the fact. At all events, the solution of soda is an excellent detergent, and exerts a happy influence. We not unfrequently give, *inter alia*, a few drops of the tincture of belladonna, with satisfactory results. This remedy certainly exerts an influence over the secretions from the mucous membrane of the throat and other parts, both in health and in disease. We sometimes hear valvular clicks in the superior bronchial tubes; in such cases we resort to the iodide of potass, and we are well satisfied that it exerts a beneficial influence. The iodide of iron and codliver oil promote convalescence. We agree with Dr. Greenhow in the use of the tincture of iron in albuminuria; and we have confidence also in tannic acid in this complication.

Every case certainly requires modifications of treatment, which must be left to the judgment of the practitioner. When paralysis supervenes the most available remedies are electro-galvanism and the different preparations of nux vomica. At all times, and in all cases, proper attention must be given to the general laws of hygiene, to food, water, ventilation and cleanliness; and all vessels, clothes, &c., in the service of the patients should be kept from other use.

Diphtheria, so far as the records go, has not been attended with any great fatality in this city. In the annual report of the Board of Health for 1860, we find but seven deaths from this disease—one in the month of April and the others in November and December. There were certainly other fatal cases during the year.

Prof. Frick died of it in March, after performing tracheotomy upon a woman who also died of it; and this woman had just lost two daughters by the same disease, which appeared to be transmitted in a regular chain from one to the other. These four cases, then, must be added to the seven. During the same year there were two hundred and ninety-three deaths from croup. It is highly probable that some, perhaps many, of these were of that form which originates

in the fauces. This is sometimes called diphtheritic croup; by which we may understand, conventionally, that the croup began in the fauces. True croup, of course, *always* presents diphtheritic membrane.

We have extended this review far beyond our original design, but we have been led on by a desire to make a summary exhibition of the most prominent facts and views, as regards the nature and treatment of this important disease, as well as to give our opinion of Dr. Greenhow's work. We may say of this book, finally, that we can cordially recommend it to the medical public.

R. McS.



II. *La Medicine du Prophète, traduit de l'Arabe; par M. LE DOCTEUR PERRON.* Alger, Chez Tissier, Rue Bâb-el-Oued, Maison Picon. 1860—pp. 228, 8vo.

The Northern portion of Africa is by no means the uncivilized region which, in our ignorance, we suppose it to be. Medical societies have sprung up at Cairo and Alexandria. There is a Medical College in Egypt, a *Collège arabe-français* at Algiers, and an Algerine literature, which, although small, is highly respectable and scientific in character. The Medicine of the Prophet is really a book of great interest to the student of medicine, consisting, as it does, of the maxims, counsels, observances, practices, &c., which were attributed to the Prophet, handed down by tradition from generation to generation, collected by le cheikh, l'imân, le savant Djélâl ed-dîn Abou Soleiman Dâoud, and translated by Perron.

The book is not a mere nosography, but it comprises aphorisms on the whole art and science of curing diseases, hygiene, *materia medica*, therapeutics, and everything relating to health. Here are to be found the seed thoughts which afterwards, with little or no cultivation, were developed into the systems of Avicenna and his followers, furnishing material that aided in the study of medical science in Europe at the

revival of letters. Necessarily the whole collection bears the authoritative character which anything proceeding from Mahomet's mouth would have for his disciples, and we can well understand how a religious attention to principles, that are here laid down, would be to a certain extent demanded of these disciples.

The first editor, if we may so designate him, of this collection, in his preface, seems to exalt the mission of medicine to a very high position. The following will show in what esteem he holds the duties of the medical man: "The most meritorious actions, the most profitable, the most useful works, next to submission to divine command and avoidance of forbidden actions, are those whose consequences tend to the conservation of health and the treatment of diseases."

We will endeavor in as brief a manner as possible to give our readers some idea of this book. It is divided into three parts, each of which will claim some little attention from us.

The first division comprises theoretical and practical medicine. Theoretical medicine is necessarily very meagre, as the early days of the profession were marked with empiricism, and science had little to do with philosophizing on quasi facts. We find that there are four elements—fire, the warm and dry; air, the humid and warm; water, the cold and humid; and earth, the cold and dry element. The same adjectives are used to describe the temperaments—four of which being simple are known as warm, cold, humid or dry; and four others compound receive their names by compounding these together. There are also four humors in the body—the blood, characterized as warm humid; the lymph, as cold humid; the bile, as dry warm, and atrabile, as dry cold. The elements, temperaments and humors constitute the three first series of natural things; the fourth includes the primitive organs, the fifth the vital spirits, the sixth the vital forces, (natural, animal and passional,) and the seventh the forces of attraction and repulsion.

There are three conditions or modes of existence in which the human body can be found—health, disease, and a condi-

tion which is neither of these two, such as that of convalescents and old people. Health is that mode of existence, that bodily condition, in which the acts and functions are performed with perfect regularity. Health is the greatest of all blessings dispensed by God to mankind, since deprived of it, he could not enjoy liberty of action nor accomplish his duties towards God.

As to Etiology all may be comprised in a few words. The causes of disease are attributable to six different sources, viz: The atmosphere, food and drink, bodily motion and rest, passional excitement and rest, sleep and waking, the discharge or retention of the excrements.

The maxims given under the head of practical medicine show an intelligent appreciation of hygienic principles. We are told to take food when the sense of smell recognizes odors most readily, &c., and that to eat without feeling the need of food stupefies the soul, engenders indolence and excites the causes of disease. In drinking water moderation must also be practised, lest digestion be injured. Moderate exercise is one of the most powerful agencies in the conservation of health, because it excites animal heat, favors the accomplishment of the secretions and gives lightness and animation to the body. As for coition, quite a number of rules and maxims are given which we cannot reproduce here. They occupy a singular place in a treatise professing to be religious, but all becomes intelligible with the thought that polygamy, to the Mahometan mind, is the normal condition of the race—that is of the male sex, since the other sex are possessed of no souls, and hence cannot enter largely into one's philosophical reflections except as connected with sensual delights. Aphrodisiacs are mentioned—eggs supported by the authority of the prophet, heriqâh recommended by the Angel Gabriel, (heriqâh is nothing but a thick broth of meat and grains of various kinds,) lupins, onions, chickens, small birds, &c., may also be considered as reliable.

Bleeding and cupping are recognized as capable of preserving health and adapted to the treatment of disease. Cupping

was a favorite method of treating headache with the prophet, although it is stated that the effect is limited to the surface of the body, while bleeding carries its effects into the very innermost portions of the system. But bleeding, when had recourse to at improper seasons (cupping should always be practised at the decrease of the moon and bleeding at its increase); or when not necessary, will debilitate the body and unnecessarily abstract the *humor* indispensable to life itself. Neither bleeding nor cupping should be employed in cholera, in convalescence, in the case of a debilitated old man, in an individual with a weak liver or stomach, or with swellings of the face or feet, in the case of a woman *enceinte*, in child-bed or while menstruating.

The second division of the Medicine of the Prophet is of more interest than the first. It is devoted to therapeutics and practice of medicine. Medicaments are divided into those which have no sensible effect on the economy, those which have a beneficial effect, those which may be very hurtful without causing death, and those which may destroy life. As to their composition, all medicaments are artificial and officinal as theriac, or natural as milk. The medical substances, of which an account more or less full is given, are arranged alphabetically, with that regard to system and classification which would have delighted such of our modern professors of Mat. Med. as include cheese, crackers and chloroform in one lecture, because they commence with the same letter. The origin of anything like an attempt, at collecting an account of the properties and influences of medicines, is attributed to Solomon, who prepared a book on medicine and one on the characteristics and uses of medicines. The present collection comprises between two and three hundred articles considered medicinal. The arabic names are accompanied by the scientific names (supplied by Dr. Perron). The descriptions are somewhat full as to physical properties, their general properties, whether hot, cold, humid or dry, and their effects on the system. Occasionally a direct reference to the use of an article by the Prophet is mentioned, and the

circumstances are described under which he employed it. Much that is interesting and a great deal that is valuable might be extracted. With the view, however, of giving our readers an idea of the mode of description employed, we will extract a few paragraphs from this portion of the book under review:

“Scammony (*mahmoûdah*) evacuates the bile. It preserves its medical properties as long as thirty-four years.”

“Sarriette or thyme drives away flatulence, dissolves (!) gaseous swellings, facilitates difficult digestions, purifies the color, increases the secretion of urine and the flow of the menses, is useful in cases of sluggish and cold stomachs or livers, excites the appetite. When respired it alleviates coryza. Taken in drink it destroys *lumbrici* and *tænia*. Perfume your residences with thyme and olibanum, said the Prophet.”

Of perfumes we may imagine much account would be made in this book, since to Mahomet is attributed the words: “those which I love most in this your lower world, are women and perfumes.” Indeed, in the Koran, it is stated that in Paradise delicious wine flavored with musk should be given as drink. It is pronounced “warm, dry and cordial,—the most noble of perfumes, the best excitant of cold and sluggish temperaments. It animates the forces of the internal organs, whether taken in one’s drink or respired. It is excellent in cases of fainting and palpitations; it drives away pains and annuls the action of poisons. ***. Musk has the property of correcting the air especially in time of an epidemic.”

The third division is devoted to the treatment of diseases and modes of prophylaxis. Compound remedies are recommended for the following reasons, to aid the action of a simple medicine or to dispel any repugnance that it may excite, to increase the activity, to diminish activity, to prevent injury from a very active substance, to preserve the active properties of a substance, to oppose a compound disease by a compound remedy, to reach a disease whose seat is some distance from the stomach, &c. &. Medicines may be given

in cold infusion, decoction, boluses or pills, or injections. It may be interesting to our readers to know who first employed the latter mode of administering a remedy, and therefore we furnish the following extract:

"The first animal that ever employed injections was a bird. This bird had eaten copiously of fish, which it obtained from the water by means of its bill. L'oiseau se sentant surchargé, prit, dans son bec, de l'eau de la mer et se l'introduisit dans l'anus. L'oiseau évacua ce qu'il avait mangé. We have already shown that salt water is purgative."

After discussing the question whether it is better to use medicines in disease than to leave nature alone, it is decided to the advantage of the medical practitioner. Medicines may be taken from one who is not a Mussulman, provided they are not prohibited; but diet is considered as of immense importance.

In the treatment of fever cold water is specially serviceable. The Prophet himself called fever *un feu de l'enfer*, and orders that it should be quenched with water.

"It is the unanimous opinion of physicians that water is the most useful beverage for those suffering under acute fever, on account of its emollient properties, its facility of transmission throughout the whole economy, and its levity so pleasant for the intestines. Under certain circumstances, it is necessary to diminish its temperature, which is accomplished by adding ice or snow, &c."

The following paragraph relates to the treatment of special fevers:

"Fever may proceed from the blood, and the symptoms are redness of face and eyes. The treatment then is bleeding and cupping (always employing scarification) and acidulated infusions. Fever may proceed from the bile, which is characterized by a yellowish or pale color of the face, sleeplessness, bilious vomitings, bitterness of the mouth. After this form of fever is removed by treatment, in which syrup of peaches is employed and laxatives to keep the bowels open, stimulants and nutritious substances are recommended."

In treating a case of serpent bite, wakefulness must be kept

up in the patient, otherwise the poison will glide into the secret recesses of the body. *Cups should be applied over the bite* and should be made to draw with force as recommended also in the case of a mad dog bite. Bleeding is of no absolute utility; it is useful when the poison is expanded throughout the whole economy, but at the commencement of the case is useless.

The individual who wishes to guard against the effect of pestilence or plague should keep his bowels free from faecal humidities, should restrain his appetites, dispense with bathing, preserve absolute repose, quieting all agitation or effervescences of the humors.

The fourth section of the third division is devoted to Anatomy and Physiology, and contains some most marvellous accounts of the formation and functions of different organs of the body. The sperm is at first a sort of creamy *spuma*, then it becomes blood—a haematoïd substance; then flesh—a sarcoid substance; then it assumes a form and acquires the power of motion. The term of gestation of a viable infant has its minimum at 182 days, while a more favorable length of time is 208 days (or 26 days more). There is spermatic fluid also of the female, which is limpid yellow. Whichever of the two spermatic fluids conquers the other determines the resemblance of the child to that parent. The spermatic liquid of the man forms the bones of the fundamental organs, that of the woman the flesh. The office of the lungs is somewhat singular—it is as a fan or bellows which blows upon the heart in order to prevent the extinction of its heat. The heart itself is the focus of the internal caloric, and when it is not kept in operation by the admission of air it is speedily extinguished. The mouth and nasal fossæ are useful in admitting air to the lungs.

We would be tempted to the transfer of much of this interesting volume to our pages, did not the literature of the day present so many claims, which we dare not put aside even for the pleasure of publishing that which would prove of especial attraction to the student of the history of medi-

cine. We are satisfied that the *materia medica* and *therapeutics* of this book are quite as good as found in the pages of old Culpepper of England, and much more astonishing when we consider their antiquity. Dr. Perron has done good work by transferring the book from the Arabic to the French, in which language it is more accessible to the ordinary student.

L. H. S.

III. *The Transactions of the American Medical Association.*

Instituted 1847. Vol. XIII. 8vo. pp. 930. Philadelphia: 1860.

This portly volume constitutes the published record of the thirteenth annual meeting of the Association, which was held in June, 1860, at the city of New Haven. Besides the minutes of the meeting, it contains various papers on scientific subjects, reports of committees, etc., presented on that occasion; and concludes with the plan of organization of the Association, the code of ethics adopted by it, and a list of its officers and members.

As might be inferred from its title, the object of this body is to preserve and further the interests of the medical profession in the United States. We should, therefore, regard its first duty as relating to matters of medical education, and to the maintenance of a high moral and intellectual standard among those who are or seek to be practitioners of the healing art. Closely connected with this, in some measure, indeed, involved in it, is the establishment of means for the hindrance of quackery, and for the mutual protection of the orthodox against the rivalry of charlatanism. An incidental advantage is also gained by the fostering of friendly feelings, as well as by the demonstration of common interest, between the scattered members of our professional brotherhood; and lastly, it may be expected that such an association should contribute directly to the advancement of medical science.

We have now to inquire how far the present volume is indicative of the successful accomplishment of any or all of these aims.

Let us begin by considering those papers on scientific subjects, which were deemed available for publication under the acceptance of the Association. They are seven in number, and bear the following titles: Report on the Medical Topography and Epidemics of New York, by Joseph H. Smith, M. D.; Report on the Medical Topography and Epidemics of North Carolina, by James H. Dickson, M. D.; Report on the Various Surgical Operations for the Relief of Defective Vision, by Montrose A. Pallen, M. D., of St. Louis, Mo.; Report on the Improvements in the Art and Science of Surgery in the past Fifty Years, by Joseph N. McDowell, M. D., of St. Louis, Mo.; Report on Morbus Coxarius, by Lewis A. Sayre, M. D.; Report on the Influence of Alcoholic Drinks on Development and Progress of Pulmonary Tuberculosis, by N. S. Davis, M. D., of Illinois; Report on the Education of Imbecile and Idiotic Children, by H. P. Ayres, M. D., of Fort Wayne, Indiana.

Of the first two papers in this list, Dr. Dickson's is by far the more practical. Dr. Smith has adopted a more extensive plan, but his details are meagre, and there is a want of unity between the different portions of his essay. From its very nature, epidemiology is a subject demanding the closest reasoning and the most accurate language, while its magnitude is such as to preclude any attempt at discussing its principles in anything short of a treatise. But the collection of the facts bearing upon it in all the States, would afford, in view of the extent and variety of climate and soil thus embraced, a mass of material from which it might be possible to draw some general conclusions.

Dr. Pallen's essay, in which he tells us he considers only "strictly *ocular*" subjects, seems to us a rather carelessly written compilation. Such papers may be useful in a random way, by occasionally saving trouble in looking up an

opinion, but they do not cost their authors much labor, and hence cannot bring any great advantage either to them or to their readers. Real progress, a solid gain in science, must be won by hard work; and our profession will be found to have been advanced solely through the efforts of those who have accepted this condition. As to Dr. McDowell's paper, we are surprised at his having written it, and still more, that it should have been published by the Association. It is simply a loose, sketchy, rambling squib, the burden of which is that Americans are great surgeons, and need no instruction from Europeans or their books.

We are glad to be able to speak more favorably of Dr. Sayre's contribution. Dr. S. takes the ground that hip-joint disease is in the great majority of cases of traumatic origin, and that the scrofulous and tuberculous phenomena are its effect instead of its cause. After a pretty full discussion of the various facts and opinions which have been brought forward on the subject, he argues for the maintenance of perfect rest, for the opening of the joint when suppuration occurs, and for the excision of the head of the femur when practicable.

Of Dr. Davis' paper we have nothing to say, because it seems to us to contain absolutely nothing. The other of the two medical papers on our list is of a different order. Dr. Ayres has rendered a most important service to a truly benificent movement, by which it is sought to cause the light of reason to shine into the hopeless, cheerless, aimless lot of the idiot, and with gentle, patient care to give strength to the tottering intellect of the imbecile. It would hardly be possible to speak too strongly of the value of this plan, which is as yet but in its infancy; we look upon it as one of the noblest developments of true Christianity, and trust that Dr. Ayres' Report, as the first one to our knowledge made in this country upon the general subject, will be widely circulated.

Perhaps we ought to have included Dr. McDermont's Report on Inebriate Asylums in our catalogue of scientific papers, but it seems to treat more of a matter of policy than of

pure science. He is decidedly in favor of such institutions, and quotes weighty authorities in support of his opinion. There are two portions of this volume which bear upon the subject of Medical education: the address of Dr. Miller, the retiring President, and the Report of the Standing Committee on Medical Education. Dr. Miller's address, although sound in its tendency, touches upon this matter in general terms, and does not seem to us to strike at the root of existing evils. Nor do we think that the Committee's Report, with respect be it said, covers the whole ground of the difficulty. Having been for some years past in constant association with the students of a large and flourishing school, in the capacity of a teacher, we have been led to think a good deal upon the matters at issue, and beg to offer a few suggestions with regard to them.

The main points of discussion, in the American Medical Association and elsewhere, have been the preliminary preparation of students, the length of time to be spent in attending lectures, the value to be attached to clinical instruction in colleges, the requisites for graduation, and the best mode of applying the proper tests of proficiency. It cannot be denied that these are all points of importance, but with the exception of the last, they seem to us to belong properly to the internal economy of each school, nor do they admit of uniform solution. Take for instance the question of preparatory education. A classical training, an advantage to any man in whatever position, is especially desirable in the members of a body whose most familiar title implies that they are learned in a more than ordinary degree; it is absolutely essential if we would hold our own with those who stand high in the social scale. Of men thus furnished, there must always be a due proportion among physicians; nor would we at all favor the opening of our ranks to the illiterate. But let a man of good, perhaps of superior capacity, able to read, write and speak well, stand at the threshold of a medical school and ask to be enrolled among the candidates for its diploma; is he to be turned away because he

has never read a line of Homer or Virgil? Many and many such a man is now engaged in laboriously and usefully practising, with skill and common sense, what he has learned from his teachers and his experience; and the medical profession as well as the community could ill afford to spare them. We cannot establish an unvarying standard; it is upon the private teachers or preceptors that the duty falls of discouraging those whose capacity or whose zeal is unequal to the task they would assume. Until these gentlemen recognize this obligation, unsuitable persons will find their way into our classes.

As to the length and number of the courses of lectures to be attended, it needs very little acumen to perceive that teachers vary greatly in their powers of communicating, and students in their power of taking in, instruction. And so also in regard to clinical teaching in colleges; this may be so conducted, we firmly believe, as to supply in great measure the place of the opportunities afforded by following hospital or private practice, when the latter cannot be obtained. If two years time cannot be so laid out as to qualify an intelligent man for entering upon the practice of medicine or surgery, the aggregate mischief done by the graduates under the prevailing system, in the first five years of their licentiate, must be something fearful.

With regard to the requisites for graduation, and the best modes of applying the tests, we labor under a peculiar disadvantage in this country, from the want of any centralized and authoritative oversight of the schools collectively. The American Medical Association is powerless, except to offer suggestions which may or may not be heeded. It is against the spirit of our institutions to combine the State with the Church, or with the legal or medical professions; and we say it with shame, but the jealousies of rival schools would be too apt to preclude any action by a convention of medical teachers. For the present, therefore, the whole subject of medical education must remain in the hands of the authorities of the several colleges. Certain are we that the resolu-

tions formally passed by the Association in June last have been totally disregarded by the most prominent medical schools in the country, and will remain so.

A Report of the Committee on Medical Literature, and a necrological report, conclude the volume for the year. Neither of these papers demand more than mention.

To sum up, we cannot say that we think this fat octavo a very important contribution to scientific literature. The few good essays it contains will probably be less read than if they had been published elsewhere. It is full to overflowing with misspelt proper names, as in fact all its predecessors have been, and some of the English in it is peculiar, to use no harsher term. We trust that the foreign circulation of this volume will be limited, as its title might give the idea to our transatlantic brethren that it was the product of the utmost skill of the most learned authorities on medical matters in America.



IV. *Elements of Chemistry—Theoretical and Practical.* By WILLIAM ALLEN MILLER, M.D., F.R.S., F.C.S., Professor of Chemistry, King's College, London. Second Edition, 1860. Part I.

Since the publication in 1855, of the first edition of the work now under our notice, it has not admitted of a doubt, that the eminent professor of King's College had borne away the palm in the literature of chemical science, by combining in his three volumes, more completely, all the essential facts and theories necessary to a full understanding of the subjects, than any other English author. From that date, Miller's Chemistry has been to the English student, what Pelouze and Fremy still continues to be to the French—the best epitome of Chemistry in the language.

In five years, the author commences a second edition of his great work, and has completed, with characteristic care, the *first volume*, comprising all those strictly elementary topics, known as Chemical Physics.

A work so familiar to the student in this department, hardly requires at our hands, a searching examination. Singularly clear in its expression, and free from all unnecessary technicalities, (in which important points, the author far surpasses his eminent cotemporary, Graham,) this treatise is more general in its range, covers more ground in its illustrations and experiments, and evinces more originality than can be found elsewhere in the same compass. Hence its undisputed pre-eminence over its many worthy, and often, truly valuable rivals.

The second edition, so far as it has at present been published, has all of its original merits, and is greatly improved by the extensive and careful interpolations of the author, who has thus brought together in this volume, every recent observation in all the departments of chemical physics, down to the present date. So many and valuable are these editions, that we will confine what we have to say now, entirely to a notice of some of these points, which would be apt to interest especially, the medical philosopher.

The researches of Graham and others into the varieties of *osmosis*, have been brought prominently forward in this edition of Professor Miller's work, and afford a large field yet for experiment and thought. When we see the effect of the minutest proportion of an alkali, as carb. potash or soda,—say one part to one thousand—in favoring the osmosis of water through animal membranes, so that for every grain of the alkali diffused, there is an absorption of no less than five hundred and fifty grains of water, we have a glimpse of the wonderful influence this fact must have over the passage of fluids from the stomach into the circulating tubes of the system, containing the alkaline salts in solution with the blood serum. This rapidity of diffusion, experiments shew, may be made still more rapid by acidulating the external fluid. Graham mentions the power of chloride of sodium in *reducing* the emetic properties of other salts, a point of interest in considering the physiological bearings of that condiment of the food. These and many other observations lead

us irresistibly to the conclusion, that we have every thing to learn with regard to the phenomena of absorption, nutrition and secretion, as occurring in the animal organism, composed almost entirely of membranous structures, holding in every variety of proportion and arrangement, their positive and negative osmotics.

A kindred study to the physiologists are the experiments of Poiseuille, especially on the *flow of liquids through capillary tubes*. The ingenuity of the apparatus by which the rapidity of capillary circulation can be determined, is beyond all praise, and the results of the experiments throw light on the phenomena of life, as well as lead us to some suggestive reflections on the therapeutic action of remedies. Here we find that most of the alkalies seem to retard circulation ; the acids producing no sensible effects ; but the influence of hydro-sulphuric and hydrocyanic acids ; the nitrates of potash and ammonia, and especially the iodides, chlorides and bromides, in forcing the rapidity of the flow of the fluids through capillary tubes, attract the notice of the most superficial observer. The influence of temperature also in modifying the result is very remarkable.

Among other novel ideas and conclusions to be noted in this edition, we mention the curious experiments of Pasteur on the causes which modify crystalline forms—this ingenious investigator, by interposing mechanical impediments as a sheet of tinfoil placed upon the edges of crystal, could, as it were, direct the crystalline formation into new shapes. For instance, by such a process, the rhombic right prisms of the bimalate of ammonia would thus change gradually into hemihedral crystals of very distinct conformation.

The chapter on *light*, is much improved in this edition, and many interesting remarks are introduced upon the varieties of artificial light, produced by the use of fluorescent and phosphorescent compounds. The inimitable sky tints, so precious to the artist, who vainly seeks to reproduce, but loves so dearly to study ;—the softened shades of evening, the changing colors of early morning, even the glories of the

northern light and the splendors of the aurora,—are now not unworthily exhibited to the eye, under the conjoint influence of the inductive coil of Rhummkoorf and the fluorescent uranium glasses, solution of quinia and decoction of horse chesnuts of Gassiot, and the exhausted tube of Giessler.

One can hardly imagine how great a pleasure there is to a student of these departments of science, in the perusal of a book, which, like this, is illustrated with originality and exactness. Here, instead of the inevitable wood cuts which our American *re-publishers* ring through all the changes of authors and editions, we see new and more ingenious arrangements, drawn with skill and accuracy, naturally grouped and shaded, so as to please while they instruct, and we can only say in conclusion, that we hope when Miller falls under the hand of our enterprising home publishers, they will at least, reproduce with his valuable text, his beautiful illustrations.

J. B. McC.



V. *The Principles and Practice of Modern Surgery.* By ROBERT DRUITT, Licentiate of the Royal College of Physicians, London, &c., &c. A new and revised American edition from the eighth enlarged and improved London edition, with four hundred and thirty-two Illustrations. 8vo. pp. 695. Philadelphia: Blanchard & Lea. 1860.

Nothing gives us more sincere pleasure than the appearance of new and amended issues of standard works which have deserved and received substantial and verbal commendation, for we love not to see an author who has produced an excellent treatise suddenly become inert while his fellows are busy in keeping pace with science or in accelerating her speed. Mr. Druitt is one of those who have not been idle, for we have seen the Surgeon's Vade Mecum grow into the Principles and Practice of Modern Surgery, and this work into the augmented and vastly improved volume which is

the subject of the present notice. And besides, the new book is now issued from the American press under the auspices of an able Philadelphia surgeon, so that it comes to us rather demanding than soliciting approbation.

A comparison of the recent with the former edition establishes at once the diligence of the author and the need in which the older work stood of renovation and additions;—we have presented to us indeed, almost a new treatise, contemporaneous with the art it illustrates, and copious, reliable and comprehensible in the information it imparts. With such characters to distinguish it, we cheerfully recommend the new “*Principles*” to the readers of our profession and to the attention of those who are seeking to swell its ranks.

While we are far from being fault-finders in respect of what is in the book, we must express our regret that American surgery has received so chary, so costive a notice from the author himself; and that in the chapters on Fractures and Lithotomy especially, the American editor, has made no mention of the methods so long and successfully taught and practised by our distinguished fellow-townsman, Professor N. R. Smith. We find on page 260 that “in all cases of fracture of the leg it is a good plan to suspend or swing the injured part by means of Dr. Salter’s or some similar apparatus,” as “it is not only more comfortable for the patient, but it allows the use of the bed-pan.” Now, without disparagement to the good intention of Dr. Salter, we would insist upon the principle of *suspension* in the treatment of fractures of the extremities, not with a view to the comfort only of the patient, but to the perfection of the result by promoting and maintaining the harmonious coaptation of the fragments of the broken bone. We might make objection to the leg apparatus of Dr. Salter upon the ground that the foot is left entirely unsupported; but we prefer to disabuse the mind of the author as to the claim which is inferentially set up to the merit of having introduced into the practice of surgery a method of treating fractures which,

although betraying a glimmer of correct principle, is still as imperfect in his hands as when, thirty years ago, it was first given to the world by the distinguished Professor of Surgery in the University of Maryland. Prof. N. R. Smith says, in an addendum to the Medical and Surgical Memoirs of Prof. N. Smith, late of Yale College, Baltimore, 1831, p. 152, when speaking of the disadvantages of an apparatus fixed to the bed, "for the purpose of obviating this difficulty still more completely, I have, in some instances, suspended the whole apparatus, or rather the lower part of it, by means of pieces of hoop nailed together and placed over the foot and knee. To these cords were attached and then secured to the splint. When they are drawn sufficiently the whole apparatus and limb will be made to swing clear of the bed." And in the first volume of the Baltimore Medical and Surgical Journal and Review (1833), the same author, in the first article entitled "Observations on Fractures of the Thigh and Leg; with a description of an apparatus applicable to the treatment of such injuries," abandoning as insufficient the bed-frame and short cords, suspends the whole apparatus, known as the posterier splint, and limb by a single cord, which attaches to the ceiling. It is evident that when thus hanging freely, the limb follows so readily the motions of the body, that the danger of displacement of the ends of the broken bone must be very inconsiderable.

While upon the subject, we cannot refrain from reproducing a passage in the admirable article just quoted, which may serve for the guidance of some of our readers. It runs thus: "But I deny that forcible counter-extension is ever justifiable; first, because it is unnecessary. If the fragments of a broken bone be properly adjusted," not irritated by splint or bandages, "nor tortured by the pressure of the common extending and counter extending bands, there will be no tendency to shortening of the member. * * * If we can cause the thigh and leg to obey all the movements of the body as perfectly as the arm does (when slung for fracture) one fragment will not be thrust over the other, nor will

the muscles be provoked to contraction. I deny that by the means ordinarily used, permanent extension can possibly be maintained, in any efficient degree, during the treatment of a case of fracture."

In using the swing-splint to which we refer, extension, if desired or called for, can be accomplished by changing the vertical position of the sustaining cord for one inclining from the leg attachment; in other words, by removing the ceiling hook farther from the patient.

Under the head of Lithotomy, we find this single allusion to our countrymen: "A surgeon in America finding himself unable to extract a stone by the perineum, immediately cut into the bladder above the pubes, and extracted it that way. The patient recovered." When it is borne in mind that the operations for Lithotomy count by hundreds in the United States, it might seem surprising that if the attention of Mr. Druitt had never been called to the improvements in the operation originating in this country, his American editor should pass over them in silence. Among these, and at their head, stands the Lithotomy staff of Professor N. R. Smith, which was used by the inventor more than thirty years ago. That surgeon published an account of the instrument in the "Memoirs" referred to in 1831, and has ever since constantly employed it in private and public operations, and remarked upon it in his lectures delivered in the University of Maryland. In his own language he states that, "it occurred to me, that if any instrument could be devised which should enable the operator to do this (strike the groove in the staff at once) in all cases with precision and safety, a great improvement would be made in the simplicity, safety and celerity of the operation. After some reflection, I became persuaded that an appendage might be attached to the grooved staff in such a manner as to accomplish the object. It might be attached to the handle of the staff which, by a hinge to allow of the necessary degree of motion, could be placed in such an attitude of relation to the staff as to furnish a perfect director which

should convey the knife directly to that part of the staff which we are desirous to reach," (p. 258.)

The details of the instrument we suppress, but enough has been said to establish the practical direction of the invention. We might not be accused of prolixity, if we adverted to the "*quarter-turn*" given to the deep groove in the staff so as to throw the gorget outwards as it penetrated the bladder, or the "*indicator*" wire attached to a cup running in the groove, receiving the knife point and dragging down the wire through the handle as the gorget followed its due course in the groove—but we leave the instrument with the remark that although a Scotchman announced very recently an instrument not unlike Prof. Smith's, and has been duly honored for the invention by the English medical press and by the employment of it in the hands of eminent British surgeons, the claims of the distinguished surgeon of Baltimore are unknown and of course unrecognized even in a neighboring city, in which he once took up his abode.

As we have already observed, the new edition of Druitt is vastly superior to its predecessor, and we take pleasure in recommending it to the profession as a safe and reliable guide in modern surgery. The matter is clear and explicit; and the abundance of good illustration greatly facilitates a rapid comprehension of the text. The American editor has materially added to its usefulness both in reading matter and illustrations. It is altogether a readable and highly instructive work.

C. J.

VI. *Lives of Eminent American Physicians and Surgeons of the Nineteenth Century.* Edited by SAMUEL D. GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philad. Lindsay and Blackiston, 1861—8vo. pp. 836.

Professor Gross has done good service to the profession in giving it the very interesting work, the title of which we have placed above. Amid the multiplicity of his engagements, we are glad to see that he has found time for an un-

dertaking like the present. He has proven the truth of the saying, that "there is always time for a labor of love," and such we take this to be.

Previous to the present work, but two attempts had ever been made towards collecting memoirs of distinguished American physicians. The first of these was by Dr. James Thatcher. His work was comprised in two octavo volumes, and was published in Boston in 1828. It contained memoirs of several eminent men, and also of others, who, so far as we could ever perceive, were not remarkable for their professional standing.

Dr. Stephen W. Williams, in 1845, published a work on the same subject, which was intended as a continuation of Dr. Thatcher's volumes. Like its predecessor, it attempted to make notabilities of ordinary men, and like it also, gave many interesting facts in relation to the lives of those who had made reputations for themselves.

Dr. Gross' work is, we think, of a higher order than either of those we have mentioned. It contains biographies of thirty-two eminent American physicians and surgeons written by men who were presumed to be best acquainted with the characters they were to portray. The biographers are twenty-eight in number, and are gentlemen of unquestionable literary and scientific abilities. Two of them are somewhat prolix. An hundred and ninety pages are altogether too many in a work of the scope of that before us, to be devoted to any one memoir, even though it be a memoir of Physick.

We cannot pretend to give a review of Dr. Gross' volume. We, however, would indicate the memoir of Dr. John Warren, by Dr. Edward Warren of Boston, that of Dr. Moreton Stillé, by Dr. Samuel L. Hollingsworth of Philadelphia, and that of Dr. Charles Frick, by Dr. Francis Donaldson of Baltimore, as being admirably conceived, and as setting forth in truthful and eloquent language, the characteristics of the distinguished dead to whom they refer. The latter, especially, will commend itself to our readers as a fitting tes-

timonal from a friend, to the memory of one who, though taken from us whilst in the midst of his labors, was yet long enough in the world to prove his devotion to his profession, his adherence to virtue, and his claim to be regarded as a representative man in medicine.

W. A. H.

VII. *Theory and Practice of the Movement Cure; or, the Treatment of Lateral Curvature of the Spine; Paralysis; Indigestion; Constipation; Consumption; Angular Curvatures, and Other Deformities; Diseases Incident to Women; Derangements of the Nervous System; and Other Chronic Affections, by the Swedish System of Localized Movements.*
By CHARLES FAYETTE TAYLOR, M.D. With Illustrations.
Philadelphia: Lindsay & Blackiston. 1861. 12mo, cloth,
pp. 295.

We cannot regard a work entitled *Movement-Cure* without some degree of suspicion. The term savors unpleasantly of quackery; and is very likely to suggest the *similia similibus*-cure, the water-cure, etc. The word *cure* is a bold one when used in the title of a book to indicate the result of certain modes of treatment as applied to disease. It is an assumption that directly tends to impress us unfavorably towards a medical work. True science, like knowledge and virtue, is always modest. Had the author entitled his remedial measures the *movement treatment*, his idea would have been as fully expressed, and his language much more becoming.

From a careful perusal of this work, we learn that the author employs the term movement-cure to signify that method of treatment which consists in an intelligent system of *localized* muscular action,—not general exercise, as in walking, riding, gymnastics, etc., but the exercise of a particular muscle, or set of muscles, with a view to their development; and as a means of correcting deformities, and of remedying the various diseases named in the title. *Localized movement* is the leading and special principle of the work.

This treatment for deformity and disease, we are informed in the appendix, which is extracted from the *New American Encyclopedia*, was first introduced by "Peter Heinrich Ling, a Swedish physiologist and poet, born in Sjunga, Smaland, November 15, 1766, died at Stockholm, May 3, 1839."

Dr. Taylor, the author of the work under consideration, is the representative of Ling's system in this country.

The book is divided into two parts: Physiological and Therapeutical. The first part is completed in three chapters; which treat respectively of the "Nutritive Processes," of "Muscular Contraction," and of the "Physiology of General Exercise." This part of the work, which is of the most elementary character, might, we think, have been dispensed with without detracting from the comprehensibleness of the author's theory of the movement-cure. We do not wish it to be inferred from these remarks that it is not in our opinion highly important,—nay, essential,—to be fully informed on the subjects treated in these primary chapters, before being fitted to practice the movement-cure, or any other cure; but it is presumed that all medical men are perfectly *au fait* of these well-established physiological principles. And if the author had not a view to readers from the "general public," we think that he should have respected the intelligence of the profession more than to have re-introduced for their perusal the trite lessons learned from the text books in their early days of pupilage.

In the second—the therapeutical part, lies the essence of the treatise. We here have the practical application of the author's plan of treatment.

In cases of lateral curvature of the spine, dependent upon muscular weakness, or unequal muscular contraction, this movement treatment is undoubtedly of great value; for the weakened muscles by systematic exercise may be strengthened to perform their normal functions; and thus remove, at the same time, the deformity and its cause.

This treatment is no doubt highly efficient also in those cases of paralysis of motion where the cause has ceased to

operate, and the paralysis continues from debility of function, and from habit.

The author very justly condemns the indiscriminate employment of electricity in paralysis; and even doubts its utility in any form of that malady.

The remaining chapters, treating upon the circulation of the blood, constipation of the bowels, chronic diarrhoea, dyspepsia, pulmonary consumption, angular curvature of the spine, deformities of the limbs, chronic injuries to the foot and ankle, diseases incident to women, and derangements of the nervous system, are all worthy of notice, but our limits will not permit special reference to them. The application of this species of treatment to women bed-ridden from derangements of the nervous system, as set forth in the last chapter, strikes us as being particularly appropriate. We have such a case now under our care; and design trying, if practicable, the effects of the author's plan upon this patient.

The particular movements necessary to remedy any given defect, are well explained in the book by numerous illustrations.. This treatment cannot, we presume, be advantageously employed in general practice, from the fact that the physician could not be present himself to attend to its exercise as often as would be required, and from the great difficulty of procuring the services of competent and willing assistants. It can only be carried out systematically and efficiently, we should think, in a properly arranged hospital; such as we infer is conducted by Dr. Taylor, in New York.

In conclusion, we would say that this work, although open to the objections that we have indicated, contains many valuable practical suggestions, which are of sufficient importance to render the book worthy of an attentive perusal by the members of the medical profession. W. S. F.

VIII. *On Diabetes and its Successful Treatment.* By JOHN S. CAMPLIN, M.D., F.L.S. From the second London edition. New York: S. S. & W. Wood, 1861—12mo. pp. 87.

The first third of this little book is occupied with the de-

tails of the treatment adopted by the author in his own case. This consisted in the main of the use of a diet, in which bran formed the chief constituent; a moderate allowance of animal food, with vegetables containing little or no starch or sugar, (such as the cruciferæ) being also taken. Under this treatment, together with proper hygienic management, Dr. Camplin recovered his health and was able to live upon ordinary food. Two or three relapses however occurred, but a return to his bran bread, &c., restored him.

In the remainder of the work, the views of Dr. Prout M. Bernard and Dr. Pavy, relative to the pathology of diabetes are referred to, and several other cases showing the efficacy of the plan of treatment employed by Dr. Camplin are given. In all these the method in question appears to have acted successfully. There is much more valuable matter in this little volume, consisting principally of details as to medicine, food, &c., for which we must refer our readers to the work itself. Dr. Camplin's views certainly deserve consideration, and if further experience should confirm the results at which he has arrived, he will have conferred no small benefit to practical medicine.

Dr. Camplin writes conscientiously, and with that becoming modesty which the truly scientific and earnest physician generally possesses.

J. F. S.

SELECTIONS.

1. *On the Antiphlogistic Treatment of Uterine Inflammation.*
By EDWARD J. TILT, M.D., M.R.C.P., Consulting Physician to the Yarrington General Dispensary and Lying-in Charity.

It was doubtless an error to deduce all pathology from inflammation; but, in practice, inflammation is the main pathological condition ever present to the medical mind, as a reality to contend with, or an eventuality to guard against.

Having to treat a case, we almost instinctively ask ourselves, is the disease inflammatory or not? Is inflammation the sole element, or merely a complicating element of the morbid problem? If inflammation, of what kind and type, and at what stage of its career? We do this because we know the frequency of inflammation; that if acute, it may speedily prove fatal, or undermine the constitution; while, if chronic, we are better able to check its progress than that of many other morbid conditions. This applies *in toto* to the pathology of the ovario-uterine organs. In non-parturient women, *acute* inflammation seldom terminates fatally, though *chronic* very frequently renders life a burden by the numerous morbid states which it develops, such as diseases of menstruation, ulceration, hypertrophy and displacements of the womb, sterility, and various forms of neuralgia.

My present object is to pass in review the various ways of treating inflammatory affections of the womb, so as to trace what seem to me the *essentials of uterine therapeutics*. Passing rapidly over uncontested points of practice, I shall dwell much longer on caustics; but I disclaim all intention of being complete, as it is not worth my while to copy from esteemed pathologists many excellent passages which grace their writings. With regard to the order to be adopted in discussing the various ways of treating uterine inflammation, I cannot do better than adopt that in which remedies are suggested by the emergencies of individual cases. Therefore I shall treat of—

1st. Antiphlogistics, by which we control the disordered phenomena of the circulating system.

2nd. Sedatives, by which we more particularly alleviate pain and morbid conditions of the nervous system.

3rd. Substitutives, such as the salts of zinc and silver, by which we modify the unhealthy action of the capillaries engaged in the process of nutrition.

4th. Caustics, which remove a portion of unsound tissue, and impart greater vitality to the remainder.

5th. Tonics, which support the power of life depressed by the severity of disease or its protraction; agents which so improve nutrition as to reconstitute the system.

6th. Mechanical agencies, by which we remedy the displacements of an organ whose normal amount of limited movability is liable to be disturbed in many ways.

Treatment of Uterine Inflammation by Venesection and Leeches—Bloodletting.—Notwithstanding all the arguments that have been ingeniously brought against venesection by

my friends, Dr. Bennet and Dr. Markham, I find it just as useful now as I did twenty-five years ago, whenever acute inflammation of the womb is more or less complicated by pelvic peritonitis, and has caused fevers and other symptoms in women of average strength. What harm can be done, in such a case, by taking from the arm eight to ten ounces of blood? I believe, on the contrary, that this favors the action of other remedies, and shortens the duration of disease without protracting convalescence; so I do not feel disposed to give up a remedy which has stood the test of ages, notwithstanding the manner in which it has been abused. Neither do I hold that Lisfranc's plan of taking three or four ounces of blood from the arm before the menstrual periods, in the treatment of chronic diseases of the womb, should be altogether abandoned, as it has been by his countrymen; but my space is too limited to permit of my discussing this question.

Leeches.—Contemporary scepticism has not yet sought to shake our faith in the value of local blood-letting by leeches, and no therapeutical injunction is supported by a similar amount of concurrent approval. When the various inflammatory affections of the womb and of its adjacent organs were all lumped under what was called *inflammation of the bowels*, leeches in large numbers were generally applied to the abdominal walls, or to the inner part of the thighs. We do so now with advantage when the peritoneum is inflamed, and when we think it desirable not to apply leeches to the womb, on account of the irritable condition of the vagina or its virgin state. Both on account of the loss of blood, and as a result of reflex action conveyed from the skin to the inflamed part by the vaso-motor nerves, leeches thus applied are certainly very serviceable: but the insular position of the womb evidently renders it less liable to be thus influenced than by leeches applied to the inflamed womb itself. The characteristic phenomena of inflammation are much more likely to be reduced when the blood is taken directly from the inflamed organ; and by rendering this possible by means of the speculum, my friend and early teacher, Professor Becamier, contributed immensely to the thereapeutics of diseases of women. Again, upon this point unanimity is striking, and I am surprised to find Becquerel asserting in a work just published that leeches applied to the inflamed womb rather increase than diminish inflammation, and that he pre-

fers the application of leeches to the thighs or venesection.—This statement is in direct opposition to the experience of the many talented observers who practise in Paris, Germany, America and in the British Empire.

By applying leeches to the womb we either seek—1st. To reduce inflammation. 2d. To reduce congestion, and promote absorption. 3rd. To increase congestion, and determine menstruation.

If we want to diminish inflammation and congestion, we must apply leeches in a sufficient number so as to relieve, and not congest, the womb. The number of leeches must be governed, not only by the requirements of the case, but by the size of the speculum to be used; for it is useless to apply a large number of leeches through a small speculum, for when they have not sufficient room they refuse to bite, or those that have not taken interfere with those that have.—Indeed, I cannot understand the statement of writers, nor how they can possibly apply ten or twelve leeches to the neck of the womb, unless they be very small ones. I have often found the inutility of trying to apply more than four large leeches by a moderate sized speculum, more than six by a large speculum, and more than two by a small one.—When a small speculum is to be used, it is better to use small leeches, as the loss of blood seems to me to depend less on the size of the leeches than on the number of the leech-bites. In estimating the quantity of blood which will be withdrawn by the leeches, it must be borne in mind that if large leeches draw about half an ounce of blood, small ones will not draw half that quantity; so that the surgeon should state in his prescription whether he wants large or small leeches applied. Sometimes leeches remain on a long time, fill well, and very little blood afterwards comes away from the leechbites; at other times the leeches soon fall off without filling, and a large quantity of blood subsequently oozes from the leechbites. A large clot of blood is frequently passed soon after the leeches have fallen off, and blood will often continue oozing out for the two or three following days, so that the patient may lose by each leechbite from two to three ounces of blood. I have observed that much more blood is lost when the leeches are applied to the vagina than to the neck of the womb, unless its vessels be in a varicose state.—Fergusson's glass specula are the best for this purpose. I have known leeches to pass between the valves of Coxeter's bivalvular speculum, and remain inactive between the metal

tube and the vagina until they were withdrawn. This application of leeches is a tedious operation, and it may be safely trusted to a well-schooled nurse when the os uteri can be easily embraced by a full-sized speculum ; but when the vagina is undilated, as in the virgin, and when it is difficult to bring the os uteri within the field of the speculum, the practitioner ought to apply the leeches himself. I have repeatedly found that the leeches which I had ordered to be applied to the womb had been placed in the posterior, cul-de-sac of the vagina, where the protuberant leechbites could be felt. Uterine inflammation is, doubtless, benefited, but not to the same extent as if the leeches had been applied to the womb itself. It is well to promote the flow of blood by injecting hot water into the vagina, although patients will be met with in whom the practise brings on a return of increased pain.

When we apply leeches as emmenagogues, so as to promote the congestion of the womb and ovaries, we only apply a small number—two or three—so as to determine the blood current ; and the plan is very successful if the leeches be applied when the menstrual flow is due, and repeated every month, so as to teach the womb to resume a forgotten habit. The possible and unavoidable inconvenience of leeches applied to the womb are—a too abundant loss of blood, seldom, however, requiring medical interference ; too great pain is sometimes an unavoidable occurrence, for, with my friend Dr. Aran, I think Dr. Bennett has exaggerated the ill effects of leeches taken on the inside of the uterine lips, for I have known this occurrence to be unattended with pain. Twice in one month Hervey de Chegoin saw leeches applied to the neck of the womb cause severe pain and syncope. This was so unusual an occurrence that he asked himself whether leeches are venomous at certain seasons of the year ; whereas he merely met with two nervous subjects about the same time. Leeches to the neck of the womb produce nettle-rash in some women, but this soon disappears.

Frequency of Application.—I have met with cases in which the patients had gone on being leeched by a nurse, every fortnight, for one or two years, and for a long time without medical supervision. This plan has been extensively followed out, though it cannot be too strongly objected to, for it is obviously wrong to order strong medicines without watching their action. If the patients are young and delicate, the too frequent application of leeches will increase debility and

nervous excitement, and may develop any latent constitutional tendency, such as phthisis, for instance. If strong, the frequent application of leeches sets up a continual determination of blood towards the womb.

Range of Utility.—In those inflammatory affections of the neck of the womb, constituted by uterine catarrh, with or without ulceration, or a moderate amount of ulceration, the most frequently-occurring cases, I do not apply leeches, agreeing with Dr. Bennett and deprecating Scanzoni's plan of applying five or six leeches every six or eight days in most cases of ulceration. In a deep-seated ulceration on a hard or a soft hypertrophic basis, seven or eight leeches, repeated several times before or after menstruation, as I find on trial to suit best, is the plan I adopt. In internal metritis, which I believe to be a much more frequent disease than is supposed, and to form the sole or principal pathological condition in many cases of dysmenorrhœa, in some of which, without being very painful, the menstrual flow is very scanty or very profuse, or alternately so, it is well to leech the womb just before the menstrual flow, and afterwards, supposing a scanty menstrual flow has left the womb congested. The practitioner alone determines the right number of leeches in each case. When it is a question of at once applying four or five leeches to the womb, one should be more guided by the inflammatory nature of the complaint than by the state of the patient's strength. I have sometimes long hesitated to deprive weak and anaemic patients of even the smallest amount of blood; but other measures failing, I have done so with the best effects. The success of a first may lead to the trial of a second application, after some interval has elapsed. In pelvic peritonitis, which frequently follows morbid ovulation and uterine disease—in acute ovaritis, supposing the examination be not too painful, I agree with Aran and Scanzoni, that it is better to apply leeches to the womb, or, better still, to the vaginal cul-de-sac.

The vascular system of the ovario uterine organs is often permanently and actively congested, either from the menstrual molimen having been unsatisfied by its accustomed secretion, or by the retention of the secreted menstrual flow.—In such cases, a few leeches before the menstrual period will often set things right. In some cases amenorrhœa or metrorrhagia depends on congestion of the pelvic vessels, (and this may be inferred from the varicose condition of the veins of the vagina and labia,) and then leeching the vaginal cul-

de-sac is of great service. Scanzoni states that metrorrhagia which resisted the usual treatment, suddenly ceased on the application of a few leeches to the womb. I have no experience of the practice, but it deserves trial, as the quantity of blood taken away by the leeches is insignificant when compared to that otherwise lost. When fibrous tumours cause menorrhagia, it is likewise good to apply leeches to the womb before the menstrual periods.

In haematocele or hæmotic collections of blood in the pelvis, I agree with Dr. Burnutz, that the re-absorption of the effused blood is greatly promoted by two or three applications of leeches at three or four days' interval, and by another application at the first sign of the ensuing menstrual period. In this case it is better to apply the leeches to any easily attainable and bulging portion of the vagina.

Counter Indications.—I consider the application of leeches to the wound as counter indicated by very acute inflammation, and when the vagina is inflamed. Whenever a digital examination is very painful, it is to be feared that the pain and fatigue of the operation will considerably detract from the advantages to be otherwise expected from the application of leeches. By applying leeches to the inner part of the thighs and the assiduous use of emollient injections to the vagina, inflammation will generally be soon sufficiently reduced to permit the application of leeches to the womb. Leeches should not be applied in cancerous or syphilitic affections of the womb, for fear each leechbite would become an ulcer. For a similar reason, leeches should not be applied to the womb when its inflammation is characterized by the production of diphtherial membranes. In a case I am now attending, the patient had previously consulted another practitioner, who, unacquainted with this uncommon variety of disease, applied leeches to the womb. Each leechbite became an ulcer, covered with a diphtheritic membrane, and the complaint was thus greatly increased by the injudicious application of a good remedy.—*Lancet.*

II. *Clinical Lecture on Diseases of Joints.* Delivered at St. Thomas's Hospital. By SAMUEL SOLLY, Esq., F. R. S., Surgeon to the Hospital.

Gentlemen:—In my last clinical lecture I detailed to you a case of acute disease of the knee-joint, in which I was obliged to mutilate the man to save his life.

Such cases used to be more common than they are at present. The advance of surgical science has nipped them in the bud, and we usually now receive them into our hospitals in a more chronic form.

I should, perhaps, have hardly thought the case worthy of clinical remark had I not heard that a provincial celebrity had positively denied the necessity for any operative interference. I thought, then, if a man of practical experience forbids the operation, it must be just such an illustrative case as would be of use to you. Let me, then, remind you, that it was the severity of the constitutional irritation, and the agony the patient suffered from the slightest motion of the joint, which in me decided the momentous question of amputation or no amputation.

To-day I shall speak of nine cases of diseased knee-joints in which I believe I have succeeded in saving both limb and life without any operation, and one case where the same ultimate result has been obtained by the excision of the joint.

Some of these cases were sent to me from the country as good cases for excision, which of course implies, or ought to imply, that there was no prospect of curing them without an operation ; one came from a metropolitan dispensary, as a forlorn hope. The poor boy was almost *in extremis*.

There is one point which must, of course, strike you in listening to these details—viz., the length of time that some of them have been in the hospital. The power of retaining our patients in the hospital until a cure is effected is a privilege which can only be enjoyed in the old, well-endowed hospitals. And, for the sake of humanity, what a blessed privilege it is !

It is true that chloroform has robbed operations of all their pain during the performance, but it cannot remove the after pain, and it cannot remove the danger which is and must be attached to them, even when the most skillful hands manipulate.

I cannot deny that the length of time which is required to accomplish a perfect, usable ankylosis of the knee-joint in the adult (from one to two years) is an objection to the plan which I am now advocating. It is very true that in a favorable case for excision the cure is frequently complete in one-third of that time. It is also true that the cases which do best, and get well most rapidly, are those where there is very little disease, and where the operation ought never to have been performed. When I speak of from one

to two years being required to perfect an ankylosis, I refer to patients above the age of eighteen or twenty.

In different forms of disease there is also a great difference in the length of time. In scrofulous caries of bones entering into the composition of a joint, the cure is always very slow and very difficult. This observation applies almost equally to cases of excision. There is another point in favor of excision. If the operation succeeds—that is, if the patient neither dies from the effect of the operation, which I must allow is very rarely the case, or the limb is not obliged to be removed ultimately, an event not so uncommon as we could wish, then the ankylosis is more certain than that which is obtained by medical as distinguished from operative surgery. I must confess that I have been disappointed in some of my cases of natural as distinguished from artificial ankylosis, by their return to the hospital after I had hoped a complete cure had been effected. This observation applies to the boy whose joint I ultimately excised, and also to Oliver R—. In the latter instance about a month's rest and a little counter-irritation have apparently completed our triumph over the disease.

I wish to put the subject fairly before you, and not to make you attach too much value to the medico-surgical treatment as opposed to the operative; nor must I forget that the longer we practice our profession the less we are inclined to operate, unless the indications for the necessity are very apparent, till at last there is too much disposition to avoid all operations. Though I know that I have not arrived at that stage of my surgical existence, still I must take care the tendency does not tincture my instructions.

I must not detain you any longer from the consideration of the cases, the notes of which I will, however, curtail as much as possible.

Case 1.—John D—, aged twenty-four, laborer, was admitted into Abraham's ward June 11th, 1860, with disease of the right knee. He states that this knee has always been larger than the left, and when about twelve years old he injured it by a fall; but it got quite well in a few days. He attributes the origin of the present disease to a cart-wheel running over his knee seven years ago, since which it has never been well, though he has been able to walk at intervals. He has now been laid up for more than five months, and has been under the care of an old dresser of mine at the Stam-

ford Infirmary, who had applied blisters and issues ; but as it did not appear to get much better, he sent the man up to St. Thomas's as a fit case for excision.

The joint was considerably enlarged, with some tenderness on pressure on the surface, and great pain when it was moved or when the articular surfaces were pressed together. The pain at night was so great as to prevent him from sleeping. He was rather pale and weakly-looking, but had little febrile disturbance, and his appetite was good.

This was certainly a very favorable case for excision ; for although the joint was completely disorganized, the disease was not scrofulous. And these are the cases which usually progress so favorably after an operation ; but you have heard my reasons for avoiding an operation unless necessary to save life. On admission, the limb was placed on a Liston splint, and a poultice applied to the knee.

June 13th.—Moxa to the inner side of the joint, that being the most painful part. Iodine mixture twice a day.

16th.—Ordered cod-liver oil, one drachm; tincture of sesquichloride of iron, twenty minims: three times a day. Twenty-five minims of the tincture of opium every night. Moxa to the outer side of the joint.

22d.—Much less pain in the joint, and he sleeps much better. The knee appears to be slightly diminished in size.

30th.—The joint appears to be rather more swollen, but he does not complain of increased pain.

July 5th.—No alteration in the size of the knee, but rather less pain. Moxa applied just below the patella.

12th.—The joint is rather smaller and more of its natural shape. There is now very little pain, but still some tenderness on pressure on the inner side. To leave off the opium, as he now sleeps well at night.

Aug. 2d.—The joint is assuming a more natural shape, and there is no pain except on pressure. He sleeps well without opium, and his general health and appearance have much improved. Moxa ordered on the inner side.

29th.—Still some tenderness on the inner and lower part of the knee ; otherwise much better. He sleeps well, and his appetite is good.

Sept. 3d.—Moxa ordered.

December.—Since the last notes, his general health has been very good ; the joint is free from pain, and has gradually been returning towards a normal shape, and ankylosis is slowly proceeding. The limb has been kept in a state of perfect rest throughout.

Ankylosis seems to be almost, if not quite, perfect; but great care will be necessary for some time. In a few days I shall remove the splints, and allow him to move the limb a little in bed. If this amount of exercise do not induce any pain or fresh inflammation in the joint, I shall next apply a gutta percha splint, and allow him to get up and walk a little with crutches; but I do not expect that he will be able to leave the hospital with safety for the next six weeks.

Case 2.—Henry H—, aged eleven years, was admitted on the 29th June, 1860. He has been ill ten weeks with swelling and severe pain of the left knee, which came on after kneeling on the damp ground, bird-catching with his father. He was quite well previously. He is now in a state of complete exhaustion, with an emaciated countenance, expressive of great suffering, and cannot bear the slightest movement of the leg without screaming from pain. An abscess has been opened in the neighborhood of the knee-joint, and is discharging pus freely, and there is a large slough over the sacrum. Ordered cod-liver oil, one drachm; tincture of sesquichloride of iron, ten minims: to be taken twice a day.

When I first saw this poor boy, I believed that immediate amputation would produce a fatal result. I had, therefore, but one course to pursue—namely, to strengthen his vital powers, either to enable him to bear the operation if I could not improve the condition of the joint, or, what I hardly dare hope for, to do without the knife altogether.

The leg was placed on a Liston splint, and a linseed meal poultice applied. A water-cushion was ordered for the back. To have a mixed diet; wine, four ounces; porter, one pint.

July 4th, (five days after admission.)—Appetite and general health greatly improved; less pain in the knee.

11th.—The knee is better, but an abscess of considerable size has formed on the outside of the thigh. This was opened a little below the trochanter major. A splint, with a spinal support, was ordered.

21st.—Health has greatly improved, and his appearance is much altered for the better since admission. The slough on the sacrum has nearly healed; also, the abscess on the hip, and the knee is less swollen, and much less painful.

August.—He can lift the leg from the splint without pain, and firm ankylosis is taking place; his health is comparatively good.

September.—The knee appears quite solid. No fresh symptoms.

October.—The splint was left off.

November.—The knee remaining free from pain, he was allowed to get up a little; but in a few days it became swollen just below the patella, unaccompanied by pain. He was ordered to keep his bed. The potassa fusa was applied over the inflamed parts, and the limb replaced on a Liston splint.

December 31st.—Under the above treatment the swelling has subsided. The leg is still kept on the splint. The boy's health is good.

Now, as regards the cause and progress of this disease, you must have been struck with its great similarity to that of the poor fellow whose leg I was obliged to amputate. Why the difference in the results? The different ages of the two patients is quite sufficient answer without any reference to the treatment.

[Conclusion in June number.]

CHRONICLE OF MEDICAL SCIENCE.

I.—PHYSIOLOGY AND CHEMISTRY.

1. *Why the Umbilical Cord Contracts.*

In a transverse section of the umbilical cord it may be observed, that the thick middle coat of the vessels is entirely composed of smooth muscular fibres, lying in immediate contact one with the other, and in such abundance as is scarcely to be seen in any completely developed vessel. This peculiarity explains the extraordinarily great contractility of the umbilical vessels, which can be so readily seen in action on a large scale when mechanical stimuli are applied, when the vessels are divided with scissors or are pinched, or after the employment of electrical stimuli. Sometimes, upon the application of external stimuli, they even contract to such a degree that their canal is entirely closed, and thus after birth, even without the application of a ligature, as when, for example, the umbilical cord has been torn asunder, the bleeding may stop of itself.—*Virchow's Cellular Path.*

2. Crystals of Diabetic Sugar.

Dr. Gibb, of London, exhibited these crystals obtained from different samples of diabetic urine evaporated on glass slides. When the urine is very pure in sugar, and contains but little of urea and other salts, the characteristic form of diabetic crystal is obtained, namely rhomboidal prisms existing either in detached masses or in tufts; the latter may partake of true arborescence. When such is the case, with a low power under the microscope, branches running in various directions from a central stem are seen, and from these crystals are seen to shoot in different directions.

The branched form of crystallisation varies very much, but it is one of the most beautiful objects submitted to microscopic examination, and has not been before figured or described, previous to an account published by Dr. Gibb in vol. i, of the *Archives of Medicine*. When the diabetic fluid contains a larger proportion of salts, the sugar crystallises in little circular masses, with minute crystals projecting from the surface. These masses appear to be made up of an aggregation of flat plates of sugar, and when examined on a dark ground they resemble lumps of the well known barley sugar.

Previous to showing the crystals, Dr. Gibb entered into a short history of the circumstances which led to their discovery, namely, the examination of the crusts, of a diabetic tear and a drop of diabetic urine, to estimate the specific gravity of the former. A few days after evaporation they were found to be beautifully crystalline; this was in May, 1858.—*London Medical Society's Transactions*.

3. Production of Intense Cold.

Messrs. Loir and Drion have described a method by which many of the gases may be liquified in considerable quantities. It depends on the cold produced by the evaporation of volatile liquids: *e. g.* by blowing a current of dry air through several tubes into about seven ounces of ether, a temperature of -34° F. can be obtained, by which sulphurous acid gas may be liquified: if, now, this liquid sulphurous acid be substituted for ether, a minimum temperature of -50° F. may be obtained; and when liquid ammonia is used as the cooling agent, the thermometer sinks to -87° F. By this temperature the authors are able to liquify carbonic acid gas under the atmospheric pressure.

4. *Hæmine and Hæmatine as a Test in Forensic Medicine.*

Hæmine and Hæmatine do not present as yet the slightest pathological interest; but, on the other hand, they have proved of very great importance in forensic medicine on account of their having been recently employed as one of the surest tests for the examination of blood-stains. I myself have been in a position to make experiments of this sort in forensic cases. For this purpose the best mode of proceeding is to mix dried blood in as compact a form as possible with dry, crystallized, powdered common salt, and then to add to this mixture glacial acetic acid, and evaporate at a boiling heat. When this has been done, crystals of hæmine are found where the blood-corpuscles or the substance previously lay, in which the presence of hæmatine was doubtful. This is a reaction which must be ranked among the most certain and reliable ones with which we are acquainted. There is no other substance in which we know such a transformation to take place, but hæmatine. This test is extremely important, because it is applicable in the case of extremely minute quantities, only they must not be spread over too large a surface. It would therefore not be easy of application in a case where we had to deal with a cloth which had been dipped into a thin, watery fluid colored with blood. Yet I was able, in the case of a murdered man, on the sleeve of whose coat blood had spurted, and where some of the drops were only a line in diameter, from these minute specks to produce innumerable crystals of hæmine, though of course microscopical ones. In cases in which the ordinary chemical tests would necessarily absolutely fail on account of the smallness of the quantity, we are still able to obtain hæmine.

Virchow's Cellular Pathology.

5. *Voluntary Dislocation of the Crystalline Lens.*

M. Chassaignac exhibited a patient to the Paris Society of Surgery who had the power of producing a dislocation of the lens voluntarily. Paralysis of the iris exists, and the patient is enabled to cause the passage of the lens from one chamber to the other, its transparency being completely retained. Some years since M. Larrey also presented a child, exhibiting a similar peculiarity, and the lens in that instance did not become opaque until three or four years afterwards.

Union Méd., No. 125.

HYGIENE.

Mormonism, in its Physical, Moral and Mental Aspects.

Isolated in the narrow valleys of Utah, and practising the rites of a religion grossly material, of which polygamy is the main element and cohesive force, the Mormon people have arrived at a physical and mental condition, in a few years of growth, such as densely populated communities in the older parts of the world, hereditary victims of all the vices of civilization, have been ages in reaching. This condition is shown by the preponderance of female births, by the mortality of infantine life, by the large proportion of the albuminous and gelatinous types of constitution, and by the striking uniformity in facial expression and in physical conformation of the younger portion of the community. The 'peculiar institution' is practically upheld by the older men, the elders, bishops, apostles, and prophets ; and so eager is the search for young virgins, that notwithstanding the preponderance of the female population, a large percentage of the younger men remain unmarried. To sustain the system, girls are 'sealed' at the earliest manifestations of puberty, and I am credibly informed that means are not unfrequently made use of to hasten the period. The activity of the reproductive function, as a rule, is not diminished by polygamy ; on the contrary, the women are remarkable for fecundity ; but in the harems the proportion of children arriving at maturity is much less than in the rural districts of our country. An illustration of this fact is afforded by the results in that chief of polygamists, Brigham Young's case. He has, at least, forty wives. A large number of children have been born to him, a majority of whom died in infancy, leaving twenty-four, according to the most reliable accounts. These forty women in monogamous society, married, would have probably one hundred and sixty children, two-thirds of whom, under hygienic circumstances equally favorable, would have been reared. In Brigham Young and his wives, we have presented the most favorable conditions for successful polygamy possible in Mormon society, yet, in this instance, the violation of a natural law has been speedily evinced. One of the most deplorable effects of polygamy is shown in the general weakness of the boys and young men, the progeny of the 'peculiar institution.' The most observant Mormons

cannot hide from themselves the evidence of these sad effects. One of their saints, Heber C. Kimball, in recent sermons, has adverted to this sexual debility, but, with a singular blindness, attributed it to a vicious style of dressing. The sexual desires are stimulated to an unnatural degree at a very early age, and as female virtue is easy, opportunities are not wanting for their gratification.

It is a curious fact, that Mormonism makes its impress upon the countenance. Whether owing to the practice of a purely sensual and material religion, to the premature development of the passions, or to isolation, there is, nevertheless, an expression of countenance and a style of feature, which may be styled the Mormon expression and style; an expression compounded of sensuality, cunning, suspicion, and a smirking self-conceit. The yellow, sunken, cadaverous visage; the greenish-colored eyes; the thick, protuberant lips; the low forehead; the light, yellowish hair; and the lank, angular person, constitute an appearance so characteristic of the new race, the production of polygamy, as to distinguish them at a glance. The older men and women present all the physical peculiarities of the nationalities to which they belong; but these peculiarities are not propagated and continued in the race; they are lost in the prevailing Mormon type.

"If Mormonism received no additions from outside sources, these influences continuing, it is not difficult to foresee that it would eventually die out. The increase of population, independently of large annual accessions from abroad, has not been co-equal with the increase in other portions of our country. The results of polygamy here are not to be compared, without some limitations, to the results of the same institution elsewhere: its decadence must follow more speedily. In eastern life, where it has been a recognized domestic institution for ages, women are prepared for its continuance, and do not feel degraded by their association with it. The women of this Territory, how fanatical and ignorant soever, recognize their wide departure from the normal standard in all Christian countries; and, from the degradation of the mother, follows that of the child, and physical degeneracy is not a remote consequence of moral depravity.

"Mormonism, considered in a relation purely sanitary, presents some interesting features. The Mormon theology contemplates the cure of disease by miraculous interposition; hence the disciples of the healing art are not held in much

estimation. The church authorities are exceedingly jealous at an attempt to cure by ordinary therapeutics, and denounce from the pulpit any invasion of their special province. Though they claim for the “laying on of hands” (*cheirapsia*) wonderful efficacy, the number of deformities, the result of mal-practice, to be seen in any of the populous towns, rather indicates a necessity for the use of carnal means. The art of surgery is at a low ebb. Epidemic erysipelas of a virulent form is reported to prevail in this Territory, but, thus far, no cases of the disease have fallen under the observation of the medical officers serving with this army. I have reason to believe that ‘erysipelas’ is a conventional term applied to various dissimilar affections, as rheumatism, erythema, anthrax,’ &c.—*Boston Med. Journal.*

EDITORIAL AND MISCELLANEOUS.

DOCTORS.

“*Dulce est desipere in loco,*” says Horace. Whether a little chat about Doctors may or may not be strictly in place in a leading article, it is quite certain that a good book is a very pleasant companion in a railway-carriage. So at least we found Mr. Jeaffreson’s “Book about Doctors” last week, when an appreciative patient called us into the Midland counties; and so may any of our readers who make a trial of it, either on the rail, or in a snug brougham, or in an easy-chair before the bright fire, after the day’s work is over, while the smiling wife supplies the fragrant tea and joins in the mirth caused by some of the good stories about Doctors, of which the book is full. *Experto crede*, or, still better—not to forsake the Latin Grammar in our quotations—*ex uno disce omnes*,—let our readers judge of the book from a few specimens. We may pass over the days of physicians’ canes and barbers’ poles, when—

“Each son of Sol, to make him look more big,
Had on a large, grave, decent, three-tail’d wig;”

and silk-coated, lace-ruffled physicians went about on horseback, "sitting sideways on foot-cloths, like women," the hands carried in a large fur muff, to keep them "warm, and delicate of touch," and so to be able to discriminate to a nicety the qualities of the pulse. But we may glance at the "little coach and two horses" of the Restoration, and the chariot and four, or sometimes six horses, thought indispensable in the reign of Queen Anne; then figure to ourselves Jenner as a type of the booted and spurred country Doctor of the last century, galloping about Gloucestershire, "dressed in a blue coat and yellow buttons, buckskins, well-polished jockey-boots, with handsome silver spurs," wearing a broad-brimmed hat, and carrying a smart whip,—altogether very unlike the bronze personage now sitting in Trafalgar square.

We pass all this, and come down to our own time, when the "little coach" is revived in the form of the "natty brougham," and the early struggles, and screwing, and scraping, by which it is maintained, are recounted. We have heard of some such things before, but the following are new to us:—

"Who has not heard of the dashing Doctor who taught singing under the mustachioed and bearded guise of an Italian Count at a young ladies' school at Clapham, in order that he might make his daily West-end calls, between three p.m. and six p.m., in a well built brougham, drawn by a fiery steed from a livery stable? There was one noted case of a young physician, who provided himself with the means of figuring in a brougham during the May-fair morning, by occupying the box, and condescending to the gait and duties of a flyman, during the hours of darkness. It was the same carriage at both periods of the four-and-twenty hours. He lolled *in* it by daylight, and sat *on* it by gaslight. The poor fellow's secret was discovered by his forgetting himself on one occasion, and jumping *in* when he ought to have jumped *on*, and jumping *on* when he ought to have jumped *in*."

Let us pass by Phreas, Linacre, Kaye or Caius, and Mayerne, and look on Aubrey's picture of Harvey "of the lowest stature, round-faced, olivaster (like wainscot) complexion; little eie—round, very black, full of spirit; his haire black as a raven, but quite white twenty years before he died;" and then think of the great discoverer riding on "horseback with a foot-cloath to visit his patients, his man following on foot, as the fashion then was," and as "very choleric,"

in his younger days wearing “a dagger (as the fashion then was); but this Doctor would be apt to draw out his dagger upon every slight occasion.” This was too characteristic to pass over, as we do the men of the Elizabethan era—Bulleyne, a relation of the unfortunate Anne Boleyn—Butts—their successors Sir Thomas Browne, his son, grandson, and Sir Kenelm Digby,—and come to the three men whose lives bridge over the uncertain period between old Empiricism and modern Science,—Sydenham, Hans Sloane, and Heberden. But all these, the Royal Society in their time, and the great quarrel between the Physicians and Apothecaries, we have also to pass over for stories more attractive. Radcliffe and his rivals afford us some notes about the very interesting subject of FEES. Taking more than twenty guineas a-day at the end of his first year in town ; getting 500 guineas for curing Lord Portland of a diarrhoea ; 1000 guineas from Queen Mary for attending the infant Duke of Gloucester in an attack of convulsions, and 1600 guineas for going to see Lord Albermarle at Namur ; and, calculating the difference in the value of money then and now, the banker’s book must have been a very pleasant one at the year’s end ; and one can understand how Oxford has profited by the Radcliffe Library, Infirmary, Observatory, and Traveling Fellowships. As to the eighteenth century Physicians,—Freind, Gibbons, Fordyce, Beauford, and Barrowby, who thought “temperance a vice that hadn’t even the recommendation of a transient pleasure,” and the stories of their gluttony and drunkenness,—we should read of them with absolute disgust did they not serve to compare the habits of the present day with theirs, with more satisfaction than the fees the topers received, with those of our own day. The “*cacoethes donandi*” is not a besetting vice of this age. Patients now manifest enfeebled powers in other ways, although some high-minded men are obliged to resist, like Mr. Jeaffreson’s friend, who said—“I wonder at my moderation.” Those who wish to be paid fairly are often obliged to act upon the motto, “*Accipe dum dolet*”—“take your fee while your patient is in pain.” As curiosities in the fee way, we may record that of Henry Atkins, who received £6000 from James the First, for going to Scotland to attend Charles the First, when an infant ; Louis the Fourteenth, who gave his Physician and Surgeon 75,000 crowns each for one operation ; Dr. Dimsdale, who was once Member for Hertford, who got £12,000, and £500 a year for life, for going to Russia to inoculate Catherine,

besides the rank of Baron of the Empire. The Austrian Emperor Joseph made his Physician, Quarin, a Baron, and gave him a pension of £2000 a year. Hear Mr. Jeaffreson :

"Cynics have been found in plenty to rail at Physicians for loving their fees ; and one might justly retort on the Cynics that they love *nothing but* their fees. Who doesn't love the sweet money earned by his labor—be it labor of hand or brain, or both ? One thing is sure—that Doctors are underpaid. The most successful of them in our own time get far less than their predecessors of any reign, from Harry the Eighth downwards. And for honors, though the present age has seen an author raised to the peerage, no precedent has as yet been established for ennobling eminent Physicians and Surgeons.

This question of fees reminds us of the sums some Quacks, male and female, have extracted from their victims or dupes. Mesmer received in Paris in one year £16,000 ; Mrs. Stephens and her £5000 grant are well known. Her contemporary, Mrs. Mapp, or "Crazy Sally," are less so, and Mr. Jeaffreson's very curious accounts of her, and of Quack Oculists the Taylors, of Graham and his "Temple of Health," are very curious. Only thirty years ago St. John Long "showed me his pass-book with his bankers, Sir Claude Scott and Co., displaying a series of credits from July, 1829, to July, 1830, or a single year's operations, to the extent of £13,400."

Any Book about Doctors would of course be incomplete without something about Quacks : so Mr. Jeaffreson tells us of Saffold, the great Quack of Charles the Second's time ; of Sir William Reade, Queen Anne's Quack Oculist ; and of her other "sworn Oculist," Grant, the Anabaptist tinker.

"Her Majesty, sure, was in a surprise,
Or else was very short-sighted ;
When a tinker was sworn to look after her eyes,
And the mountebank, Reade, was knighted."

Then we come to the Quacks of the last century, and the first Hydropath, the Rev. John Hancock, D. D., Rector of St. Margaret's, Lothbury, the Loutherburgs, Myersbach, Katerfelto, and a host of other Quacks. But we must leave these gentry, and return to the Doctors.

The connexions of the Medical Profession with the aristocracy are illustrated by the "unpleasant old scamp" Monsey the great-grandfather of our ex-Chancellor, Lord Cranworth. Sir Hans Sloane's daughter became Lady Cadogan by marriage ; the Earl of Westmoreland married one of Dr. Saun-

ders' daughters ; Lord Combermere married the daughter of Dr. Gibbings, of Cork. As instances of sons of Medical men who have risen to the Peerage, we have Lord Sidmouth, son of Dr. Addington, of Reading ; Lord Denman, son of Dr. Denman, the Accoucheur ; and the present Lord Kingsdown, who is grandson of the late Dr. Pemberton, of Warrington. No Physician who has not left his original profession for politics or the Law Courts has yet reached the House of Lords. Sylvester Douglas, the Apothecary, obtained an Irish Peerage and the title of Lord Glenbervie, by long party service in the House of Commons ; and Henry Bickersteth—the late Lord Langdale—practised Medicine until he was twenty-eight years old, and was not called to the bar until he was thirty-one. Twenty-five years afterwards he was created a Peer. He married a daughter of Lord Oxford, to whom he had formerly been traveling Medical attendant. Talking of marriages, there was Sir Lucas Pepys, who married the Countess de Rothes ; Sir Henry Halford, whose wife was a daughter of the eleventh Lord St. John of Belsoe ; Sir John Hill, who married a daughter of Lord Ranelagh ; and Sir Hugh Smithson, who “won the greatest prize ever made by an *Æsculapius* in the marriage market.” He “won the hand of Percy’s proud heiress, and was created Duke of Northumberland.” He practised as an Apothecary in Hatton-garden, but married the heiress in 1740 : he was created Duke of Northumberland in 1766.

Here this gossip must end. Those who wish for more of the same sort, and some much better, must turn to the book which Mr. Jeaffreson has provided with the assistance of Dr. Munk, the learned Librarian of the College of Physicians, and of Dr. Diamond, who, as we well *know* and Mr. Jeaffreson *says*, “unites the graces of a scholarly mind, an enthusiasm for art, and the fascinations of a generous nature.” A generous appreciation of generosity is shown in the following passage, with which we conclude :

“ Of the generosity of Physicians one *need* say nothing, for there are few who have not experienced or witnessed it ; and one *had better* say nothing, as no words could do justice to such a subject. This writer can speak of at least one poor scholar, to whose sick-bed Physicians have come from distant quarters of the town, day after day, never taking a coin for their precious services, and always, in their graceful benevolence, seeming to find positive enjoyment in their unpaid labor.”—*Med. Times and Gazette*.

DEATH OF DR. E. J. FOUNTAIN.

We regret being called upon to announce the death of Dr. E. J. Fountain, of Davenport, Iowa, which occurred on Friday, March 29th, at 4 o'clock p. m., after an illness of a week. The particulars of this melancholy event we take from the *American Medical Times*.

On Friday, March 22d, Dr. Fountain (who, as our readers are aware, has recently introduced the chlorate of potash as a remedy in phthisis) took an ounce of the drug with the view of showing his confidence in his belief that it was a perfectly harmless agent, even when administered in large quantity. The most violent results ensued—the main and immediate effect being upon the kidneys. Inflammation of the stomach and intestines followed. The action of the drug seemed to expend itself immediately on the kidneys, a copious diuresis having occurred through the 22d, until 10 o'clock p. m. From 5 a. m. of the 23d till the time of his death there was no secretion whatever from the kidneys. An autopsy was made nineteen hours after his death, the particulars of which will be hereafter published.

THE DOCTOR.

He is a Doctor, and a Doctor only,
 Who, walking in the path of science lonely,
 Lays up a store of that peculiar teaching
 Which stands his friend, much more than all the preaching
 Of learned *savans*, who have acquir'd their lore,
 Purloin'd from the same source, that years before
 Sprang from the brain of honest humble labor,
 Now sold as *new* by parasites for favor.
 Worthy the Doctor who, with torch in hand,
 Gathers the atoms, countless as the sand,
 That makes a *fact*, and on the cairn of Science
 Leaves it for future use, with self reliance.
 Patient disciple, of thy noble art,
 Taught by the unstain'd love that swells thy heart!

[*Med. Times and Gazette.*

